DECEMBER 11, 1943

JAN 6 1944

Railway Age

Founded in 1856

THE BALDWIN GROUP
Diversity
Today, the name BALDWIN means not only locomotives for America's railroads, but also a widely diversified line of machines and instruments that equip and power industries that the railroads serve from coast to coast. The Baldwin Locomotive Works, Philadelphia
BALDWIN
Serves the Nation Which the Railroads Helped to Build

AMERICAN EXPRESS TRAIN

Greetings of the Season

TO ALL
RAILROAD MEN

AMCW

—who have shown that the Railroad
remains the nation's No. 1 carrier.

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

230 PARK AVENUE,
NEW YORK, N. Y.

445 N. SACRAMENTO BLVD.
CHICAGO, ILL.

ORGANIZED TO ACHIEVE:
Uniform Specifications
Uniform Inspection
Uniform Produtt

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 115, No. 24.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 115 December 11, 1943 No. 24

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA 23, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y. AND 105 W. ADAMS STREET, CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1081 NATIONAL PRESS BUILDING, CLEVELAND 13: TERMINAL TOWER SEATTLE 1: 1033 HENRY BUILDING, SAN FRANCISCO 4: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES 14: 530 WEST 6th STREET.

SAMUEL O. DUNN, CHAIRMAN, HENRY LEE, PRESIDENT. ROY V. WRIGHT, VICE-PRESIDENT AND SECRETARY. F. H. THOMPSON, E. T. HOWSON, F. C. KOCH, R. E. THAYER, H. A. MORRISON, J. G. LYNE, H. E. McCANDLESS, VICE-PRESIDENTS. J. T. DeMOTT, TREASURER.

SAMUEL O. DUNN, EDITOR. ROY V. WRIGHT, MANAGING EDITOR. ELMER T. HOWSON, WESTERN EDITOR. JAMES G. LYNE, ASS'T. TO EDITOR. C. B. PECK. ALFRED G. OEHLER. E. L. WOODWARD. J. H. DUNN. R. A. DOSTER. H. C. WILCOX. NEAL D. HOWARD. CHARLES LAYNG. GEORGE E. BOYD. WALTER J. TAFT. M. H. DICK. JOHN S. VREELAND. C. MILES BURPEE. ARTHUR J. McGINNIS. J. L. STOVER. C. B. TAVENNER. H. E. MEASON. LIBRARIAN: EDITH C. STONE. EDITORIAL ASSISTANT: BETTY KETCHUM.

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PAPERS (A. B. P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.).

SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR $6.00; 2 YEARS, $10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, $8.00; 2 YEARS, $14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK 7.

In This Issue

Page

Factors in Motive Power Selection ***930***

In this article, Brig. Gen. C. D. Young (retired), deputy director, ODT, observes that purchasers of steam locomotives pay dearly for their individualistic construction demands—citing a recent 12-month period in which 100 4-8-4 engines showed 10 variations in design, whereas 2 would have sufficed.

Favors a Uniform Classification ***933***

Examiners' proposed report to Interstate Commerce Commission would have railroads establish new ratings, with a set-up of 30 classes, designated in percentages of present class 100, with range from class 400 to class 11—Would have railroads unify dissimilar ratings of present Official, Southern and Western classifications.

Project at Roanoke Gives Bigger and Better Yard Facilities ***936***

Herein is described that portion of a $5,000,000 outlay by the Norfolk & Western involving 66 miles of new trackage and 1,623,000 cu. yd. of grading—Engine-terminal improvements are to be discussed in a subsequent issue.

EDITORIALS

The Railway Record Vs. Politicians' Attacks 925
To Awaken Employees' Zeal 926
First Cost of Steam Locomotives 926
Railroads Need Associations 927

GENERAL ARTICLES

Fort Slocum Graduates Its Largest Class of M. R. S. Officers ... 928
Factors in Motive Power Selection 930
Favors a Uniform Classification 933
Project at Roanoke Gives Bigger and Better Yard Facilities .. 936

NEW BOOK **940**

RAILROADS-IN-WAR NEWS **941**

GENERAL NEWS **946**

REVENUES AND EXPENSES OF RAILWAYS .. **960**

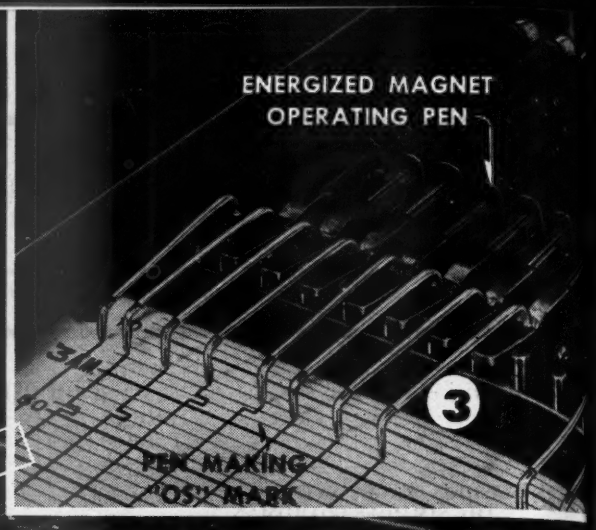
The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

★

PRINTED IN U. S. A.

Automatic Train Graph

provides an accurate record of train movements!



Train movements are recorded automatically on the train graph sheet with the "OS" marks made by the individual magnetically-operated pens.

ONE of the important operating tools available with "Union" C.T.C. systems is the Automatic Train Graph which makes a permanent record of the train movements within the controlled territory.

1. The Automatic Train Graph is mounted in the desk of the C.T.C. machine so that a three-hour portion of the continuous graph sheet is visible through the glass covers . . . **2.** The paper, which is ruled and printed for direct reading of time, is advanced under individual magnetically-operated pens at a rate of three inches an hour by an exceptionally accurate operating mechanism . . . **3.** Each pen responds to the indication codes received from its assigned "OS"ing point, such as the end of a passing siding, and makes an "OS" mark in its continuously-drawn line to record the periods of time that the particular track section is occupied.

The Automatic Train Graphs are supplied in 40 and 57 pen sizes, fitted with the number of pens required by a given C. T. C. installation. These instruments which are built with standard railroad clock precision have proved rugged and entirely dependable in service.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

The Week at a Glance

'44 TRAFFIC PROSPECTS: Freight traffic in 1944 will rise from 2 to 5 per cent over 1943, and passenger volume will mount 10 to 20 per cent—so M. J. Gormley told the Southeast Shippers Board this week in a speech reported in our news pages. Relating next year's railroad job to pre-war 1939, Mr. Gormley said the carriers will be required to handle 125 per cent more freight traffic and 327 per cent more passenger traffic. They will, he believes, successfully meet this challenge but it will call for "superhuman effort" by everybody concerned—including shippers and receivers, the government, and those who travel. To do this job the railroads will need more equipment, and to this end they have asked governmental authorities for 40 to 50 thousand more freight cars and 1,200 more locomotives by next October.

●

REVENUES ARE MODERATING: Freight revenues in October were only 1.2 per cent above those in October, 1942, representing a "continuation of the steady decline in this series of percentages from 35.9 per cent for February, 1943, over February, 1942." The increase in passenger revenues is likewise progressing at a declining percentage. These facts are brought out in the I. C. C.'s (Bureau of Economics) monthly statement, reviewed in the news pages herein. Your observer has not noted that the decline in net income is being displayed in the paper "Labor" with the same enthusiasm which marked its coverage of earnings when they were "soaring"—although this decline is an economic fact of no less importance to employees than the increase was, when it occurred.

●

FREIGHT CAR PROSPECTS: The W. P. B. has announced that it will henceforth approve the construction of all-steel cars—not insisting, as heretofore, on "ersatz" composite construction. Furthermore, this authority will approve 50,000 cars for next year (including 34,000 now scheduled, 5,000 ordered but not scheduled, and about 10,000 expected to be ordered if the proposal to extend the 5-year amortization plan on railway equipment is adopted).

●

BULWINKLE ADMONISHED: Congressman Bulwinkle recently issued a pronouncement against permitting "surface" carriers to engage in air transport—in which he contended that separation of ownership between agencies of transportation is an established institution (as, of course, slavery once was), not to be profaned. His statement is being widely disseminated by the air transport lobby, in defense of its present monopoly. But Mr. Bulwinkle has been challenged by Donald Conn, of the Transportation Association (which group is falsely accused of acting as a "lobby" for the railroads). The faulty documentation of the Bulwinkle edict is exposed, and the Congressman's attention is drawn to the fact that he is trying to deal with air transport without any consideration of other forms of transportation —whereas the public's interest extends to all forms. The farmer who devotes all his attention to his hay crop, and none to his animals or grains, may get some fine hay—but probably not any profit on his farm as a whole.

●

INTERESTING EMPLOYEES: The old days where an employee could be frightened into hard work by the admonition, "You are not paid to think, but to do as you are told" have departed, but the need of railroads for sincere application by all their forces is greater than it ever was. In one railroad department, staffed largely with immature girls, the supervisor has had some success in overcoming listlessness and unnecessary absenteeism by explaining to his charges the relationship of their work to successful operation of the railroad, and, in turn, the bearing which efficient operation of the railroad has upon early military victory—an objective which is within the comprehension of these girls. An editorial herein suggests that this precise formula might not work in all departments on all railroads—but that there *are some terms* in which every railroad job can be interpreted to any employee which would touch his own conscious interests. It is the task of the supervisor to discover the educational formula which will fit the local need, and to apply it.

●

THE REWARD OF VIRTUE: In the 12 months ended August, 1943, the railroads saved their customers $1.7 billions in lower average rates (compared to those of 1929). They likewise paid 3½ times the taxes, and much higher wages—while dividends were 60 per cent *less* than in 1929. With this great record of public service—of very minor benefit to their stockholders—the carriers are now being attacked on all sides. An attempt is being made to preclude their modernizing their service by using other forms of transportation, and they are being accused by politicians of "monopoly" in both intention and practice. The leading editorial herein suggests that the railroads can well afford to match their record of public service with that of their detractors. Not long ago, the current fashion in calumny of the carriers was to accuse them of being asleep at the switch for *not* engaging to a larger extent in other forms of transportation. Now the latest style in detraction is to assail them for "monopoly" because they seek to include various forms of hauling in their public service. The old formula: Damned if you do and damned if you don't.

●

BIGGER YARDS AT ROANOKE: The Norfolk & Western is doing a more expeditious job in handling war traffic by reason of $5,000,000 which it has recently spent in improving its Roanoke yards, the project being described in an illustrated article herein. For instance, the old eastbound gravity classification yard had 19 tracks—the new one 46, equipped with two humps. Also involved in the job was a channel change in the Roanoke River.

WAGE CASE PROGRESS: The law says that railroad wage disputes should be settled by the machinery which awarded the non-ops 8 cents more per hour, and "Congress should insist that its laws be observed"—so argues the Senate interstate commerce committee's report calling for a resolution to put the 8 cents into effect. The Vinson contention that 8 cents would be "inflation," while his patent sliding-scale of 4 to 10 would not be, is belittled. The railroads and their employees, say the Senators, are doing a fine job as in contrast to "the indescribable confusion brought about by government operation in the last war" and this unsettled wage dispute should no longer be permitted "to plague the railroad industry." Meantime Judge Byrnes has argued against a strike threat being used on the government in wartime to enforce private opinions on just wages. "Lay that pistol down, boys," is his advice to the union magnates.

●

UNION STATESMANSHIP: Alexander Whitney and Alvanley Johnson have injected their views into the current discussion of proposed air transport regulation, to support a clause which would prohibit the railroads from offering carriage by plane—thereby keeping their services modern and competitively attractive to customers in the coming post-war rivalry. What was good enough for grandpa is good enough for the America of the future, according to these far-seeing statesmen; and they don't want any of these new-fangled flying contraptions around the railroads—especially since the pilots probably don't appear to be very likely prospects as members of the B. of R. T. and B. of L. E.

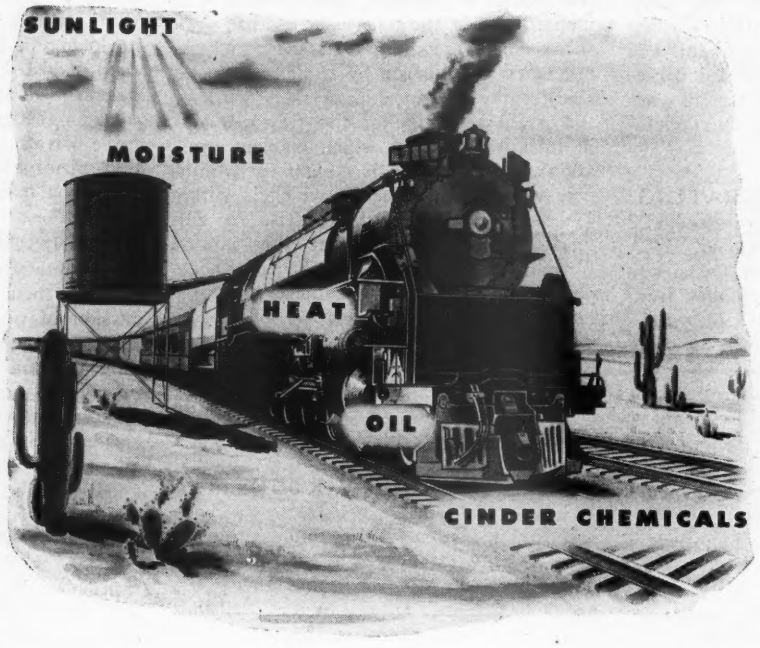
●

STANDARD STEAM LOCOS: During a recent 12-months' period, 100 steam locomotives of 4-8-4 type were ordered, built to 10 different designs. Brigadier General Young of the O. D. T. suggests in an A. S. M. E. address, reported herein, that the 10 designs into which these locomotives were separated could probably have been reduced to two—thereby permitting more mass-production processes in their manufacture, reducing their cost. In an editorial herein, the competitive position of steam power is weighed in the light of the effects on it of General Young's recommendation.

●

UNIFORM CLASSIFICATION?: Two I.C.C. examiners have recommended that a uniform classification of freight be adopted for the entire country, their views being summarized in an article in this issue. They do not contend that charges should be equal in all territories, but they maintain that distinctions can be made in a more desirable and logical manner by rate differences, rather than by variations in classification. Weight density, liability to damage, value—and the other criteria upon which freight classification logically rests—do not vary appreciably between territories, the examiners contend.

This cable resists:



Railroad hazards like the above are taken in stride by Okolite-Okoprene wires and cables. Insulated with Okolite—an oil-base insulating material—and protected by an outer sheath of Okoprene*, these wires stand up under the attack of heat, moisture, sunlight, oils, chemicals and cold. And being resistant to flame, Okolite-Okoprene wires will not communicate fire from one location to another.

For further information on Okolite-Okoprene wires and cables write for Bulletins OK-2007A, OK-2009C and OK-2036 . . . or talk it over with our engineers. The Okonite Company, Passaic, New Jersey.

*A neoprene protective covering developed by Okonite for severe operating conditions.

3396

Okolite Okoprene

THE OKONITE COMPANY
INSULATED WIRES AND CABLES

OKONITE

The Railway Record Vs. Politicians' Attacks

Attacks being made on the railways show that no service that an industry can render the public can save it, whether in peace or war, from misrepresentation and baiting by a certain class of politicians if they believe they can thereby gain anything. In the twelve months ending with August—latest full year for which statistics are available—the railways—

(1) Handled (principally for carrying on the war) 60 per cent more freight traffic than in 1929 at a 13 per cent lower revenue per ton-mile.

(2) Handled 156 per cent more passenger traffic than in 1929 at a 32½ per cent lower revenue per passenger-mile.

(3) Because of these reductions in rates, saved shippers (principally the government $974 million, and passengers $726 million, compared with what they would have paid for the same service at the rates of 1929; total saving in rates, $1 billion $700 million.

(4) Paid a 37.2 per cent higher average wage than in 1929.

(5) Paid $1 billion $352 million more taxes than in 1929—three and a half times as much.

(6) Earned $1,044 million net income, as compared with $897 million in 1929; but from their larger net income paid all their stockholders only $213 million in dividends, as compared with $490 million dividends paid in 1929.

(7) Therefore, reserved $831 million of their net income for reducing debt and rehabilitating and improving their properties, as compared with $407 million reserved in 1929.

Efficiency FOR VICTORY

And yet—in addition to being threatened with strikes against *government* wage proposals—the railways are being—

(1) Attacked by southern governors and southern members of Congress for alleged discriminations in interterritorial freight rates that have been fixed with the approval of the Interstate Commerce Commission, the government body that has existed fifty-six years to regulate rates in the *national* interest.

(2) Charged by the Department of Justice with violating the anti-trust act by practices that always have been public and have been accepted by shippers and the Commission as necessary means of enabling the Commission to regulate rates.

(3) Assailed by Vice-President Wallace with every charge of Wall Street domination that had become stale before World War I, and with the additional charges of interterritorial discriminations and "monopoly" practices and ambitions recently trumped up.

(4) Threatened with legislation by Congress (supported by their competitors) to prevent them in future from operating carriers by water, highway or air—although for years they were criticized for lack of foresight and enterprise because they did not begin two decades ago engaging more extensively in newer forms of transportation, especially by highway!

Does the public believe this record shows private management of railways has served it as unselfishly, public-spiritedly and beneficially—has contributed as much toward the war effort—as, for example, the politicians who are now in full cry against it? If the railways were dominated by Wall Street, does the public believe they would be saving the public $1 billion $700 million a year in rates, while paying 37 per cent higher wages, paying $1 billion $352 million a year more in taxes, and paying 60 per cent less dividends, than in 1929?

Surveys of public opinion show the public is not as ignorant of this record, and is not as big a fool, as the politicians attacking the railways hopefully believe.

To Awaken Employees' Zeal

In a railroad office of some size, devoted to a highly specialized assignment, there has been a large loss of old employees. The present force is composed predominantly of young girls of high school age—with interests characteristic of their years rather than those which would advance the efficiency of their work—which is, of course, essential to the smooth functioning of an industry with important wartime duties.

The papers that are processed by these girls give to the uninitiated little inkling—in themselves—of their relationship to the efficient movement of military freight and passengers. Only those more mature in years and imagination, or with attention directed to advancement in a railroad career, could be expected, under their own steam, to acquire quickly the understanding necessary to enable them to perform this class of work with zest—rather than regarding it as superfluous fatigue duty, to be shirked as much as possible.

The officer in charge of this department has sought to compensate for the inexperience of his staff by interpreting its duties to them in terms of interests natural to their years, and to their present social surroundings. In a carefully-prepared talk, he has explained to these employees where and how the work of the department fits into the railroad's overall job of efficient transportation. He has shown them in concrete terms how prompt handling of a record in this department will promote greater efficiency on the railroad, so necessary to early military victory—which will hasten the safe return of our service men. He has also told them something of the history of the railroad—and how present employees are the inheritors of a vast and useful machine, originated a century ago and passed down by several generations of investors and employees who have kept this plant intact, and constantly improved it for the providential service of their country in its present hour of need.

Immediate results—in greater zeal for their work and in reduced absenteeism—appear already to have been secured from the effort of this department head to *interpret the importance of its work to employees in terms of their own understanding.* We do not cite this instance to suggest that the method is necessarily one of general applicability. But with hundreds of thousands of new employees on the railroads—most of them inexperienced and many immature—the problem faced in the department whose situation is here recorded is the rule, rather than the exception. The formula used to cope with this problem in this department, quite likely, would not work everywhere. But some educational process *can* be discovered which will enliven the understanding and kindle the zeal of *every* educable and well-disposed employee—and it is a challenge to every supervisor with inexperienced subordinates under his direction to evolve the formula which will best meet the needs of his own group.

At least one large manufacturing concern has produced a feature-length talking film, which all new employees are required to witness, and which explains with concrete illustrations just how every occupational classification in the business makes a specific contribution to the war program—and how slovenly performance therein would endanger it. Such an effort, of course, is painting a wide canvas with a large brush; the danger in such company-wide claims to idealism being that the employee may not always find that it works out in detail, and may ascribe insincerity to the management—which is a sentiment less promotive of good-will than any which complete silence on the subject would likely engender.

More precious than rubies—in successful employee relations—is the wise, sympathetic, imaginative supervisory officer; and the top management which knows how to select, develop and encourage such men. And their value is especially evident now, when the most effective functioning of personnel is so important, and beset with such difficulties.

First Cost of Steam Locomotives

In his address on Factors Involved in the Selection of Railway Motive Power at the recent annual meeting of the American Society of Mechanical Engineers, an abstract of which appears on another page of this issue, Brig. Gen. Charles D. Young, deputy director, O. D. T., presented an incisive study of the effect of relatively slight variations in the design and proportion of steam locomotives in keeping lot sizes so small as presumably to affect first cost adversely. Selecting a recent 12 months' period during which 100 4-8-4 type locomotives were ordered, he points out that these locomotives were built to ten separate designs, whereas he is of the opinion that two designs would have met the needs of all of the ten railroads involved. "Is it unreasonable," he asks, "to suggest that the individualism of engineering involved in buying and selling steam locomotives be kept within such limits that this type of power may be adapted in considerable degree to mass production and thus benefit from the lower cost which will result?"

It is a significant fact, to which General Young called attention, that both electric and Diesel-electric locomotives have been subjected to a relatively high degree of standardization. Their design has been largely under the control of the manufacturer. Notwithstanding the more than a century of evolution through which the steam locomotive has passed, it is probably the least standardized of any physical facility used by the railroads. During most of this time it held the railway motive-power field without competition. Now that it faces competition from two other well-developed types of motive power, to which at least one more may be added soon, its future will be determined by a somewhat different set of conditions.

One of its strong points, competitively speaking, is its relatively low first cost. As the field for its application is narrowed by the encroachment of these types of motive power, the need to enhance its first-cost advantage becomes more impelling; hence, the desirability of a higher degree of standardization in design and proportions.

Railroads Need Associations

Vice-President C. H. Buford is to be commended for his suggestion to the associations subordinate to the operating-maintenance division of the A. A. R. that they proceed with plans for meetings of their members in 1944. In this action, Mr. Buford gives recognition to the value of the co-operative work that is possible only or most readily through these associations.

Through the years the American railways have led the world in the rapidity of their development. No single agency has contributed more to this result than the associations that have grown up in the major sub-divisions of railway operation, each bringing together from different roads men with common problems and interests. These men, through co-operative study, free interchange of experiences and frank discussion have done much to expedite the perfection of practices and promote their widespread adoption.

Since Pearl Harbor the railways have been so overwhelmed with traffic that their officers have been all but submerged in their work. As a result, association activities have suffered. Furthermore, there have been many who have felt that such activities should be suspended for the duration, especially since they involve taking men from their territories from time to time for meetings and give rise also to a certain amount of travel on already over-taxed railway facilities. For these various reasons, the work of most associations has largely been suspended and interest has declined to a low ebb—a trend that would soon threaten the dissolution of some of these groups.

In contrast with such views, many have seen in the work of the associations through the more normal years results of great value to those who have participated, and believe that this value increases in proportion to the needs of the members. They see in the present emergency, with its many new and baffling problems, a greater need for co-operative action and for exchange of ideas and of experiences than in more normal days and have deplored the curtailment of the activities of associations at a time when their work is needed more. It is this thinking that is now reflected in Mr. Buford's call to the associations to attack, through co-operative action, the problems of increasing accidents and rising claims by diagnosing and correcting the conditions that are causing them.

In urging the resumption of meetings, Mr. Buford implies that they will direct their attention to the problems that are now confronting the railways. To the extent that this requires departure from long standing routine, it should be done, for this is no time for blind adherence to precedents. The officers of these sections have the responsibility for developing their programs to deal most directly with the problems of their members today. Through reports and addresses, they should bring to their members information which will be most helpful to them. In other words, the programs should be "brass tacks" programs.

Where Government Control of the Economy Is Leading Us

During the thirty years since the outset of World War I, every important western country has developed a new type and technique of government. The phases, superficial features, and final forms have varied considerably according to circumstances and political personalities involved, and many trade names like National Socialism, Communism, Fascism, Liberalism and the New Deal, have been given to its manifestation in different places. Fundamentally they are the same, and technically State Capitalism is perhaps the most accurate common description; but I prefer to call them the Welfare State. . . .

What the mature Welfare-investment State means for the market picture is fairly easy to imagine, because we have already seen its pattern in the extreme case of the war economy here and abroad. Since the keystone of the structure is State control of consumption and the siphoning-off of the investment funds of the community for State use, every element of that wartime pattern is implicit in the peacetime picture. Control of prices, wages, raw material, manpower, capital markets, management and advertising; strategic rationing, grade-labeling and standardization; subsidies, capital levies, confiscatory taxation, social insurance, forced lending and income equalization, are all among the essential mechanisms of leveling and controlling mass consumption and private saving which the Wefare State must use to secure and maintain command and direction of the community's investment fund. In the perfect Capitalistic State (as in Russia) the consumer is always a potential traitor, and the market place is enemy territory, the breeding ground of counter-revolution. . . . In the final phase of the Welfare State . . . the market, as well as the welfare, will disappear.

Whether or when it will come to that is not so important as it is to recognize that we are headed for it in a handle basket. The Welfare State is here now in every country, in some of its phases. It is the prevalent form of government everywhere. . . . It has been generated by a multitude of individual decisions or indecisions within the business community and government, by business men, labor leaders and public officials . . . who have followed Sumner's cynical maxim that if you live in a country run by a committee, be sure to get on the committee. . . .

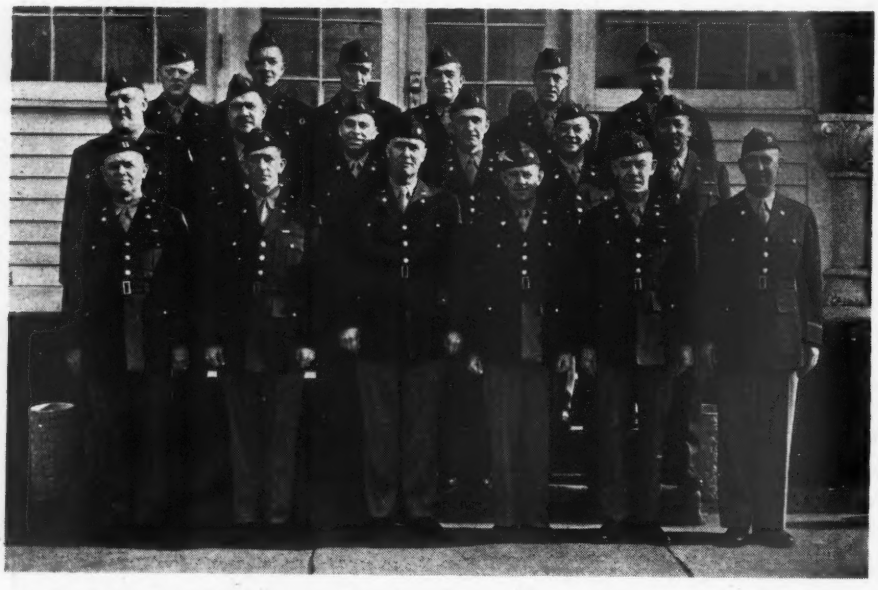
Notable contributions have been made to the atmosphere by inflated or confused or frustrated liberals, by energetic, ingenuous or ingenious glorifiers of Soviet Russia, the complete and almost perfect Capitalist State, and by a host of others who have been unaware where they were going, who imagine that when you jump off a forty-story building you can change your mind at the second floor, or who suppose that among mammals there can be such a thing as a 10 per cent pregnancy. . . .

—Dr. Virgil Jordan, President, National Industrial Conference Board, in an Address to the American Marketing Association.

Fort Slocum Graduates Its Largest Class

PENNSYLVANIA RAILROAD GROUP—717th & 724th Ry. Op. Bns.

First row, left to right—1st Lts. James R. Roberts (trav. eng.); William O. Oren (prod. eng.); Harvey R. Kelly (ym.); Capt. James K. Wilsoncroft (asst. trainm.); 1st Lts. Joseph P. Heintzelman (swm.); Kenneth J. Lally (gang forem.); Edward J. Gentsch (agt.); Stephen A. Stickle (loco. eng.); Maj. Benj. F. Hanst (ch. psgr. transp.); Second row—Capt. Geo. P. Hayes, Jr. (m. carp.); 2nd Lts. Morris W. Zeigler (sp. appr.); Douglas B. Owens (sp. appr.); David C. Hastings (asst. trk. supr.); 1st Lts. Wm. C. Fleck (m. m.); Albert M. Schofield (asst. supr. trk.); Vincent N. Harris (gang forem.); Back row—Capt. Roger W. Speidel (div. eng.); 2nd Lt. Theo. R. Schroth (ym.); 1st Lt. John S. Taylor (ym.); 2nd Lts. Oscar H. Emrich (mach.); Walter R. Catching, Jr. (asst. supr. trk.); 1st Lts. James W. Murphy (dispr.); Franklin Siedler (asst. trainm.); Stuart Shumate (asst. supr.).



THE Atlantic Coast Transportation Corps Officers Training School at Fort Slocum (New Rochelle), N. Y., on December 4 graduated a class of 193 officers—of which number 120 are in the Military Railway Service, and pictures of them are shown herewith. The speaker and principal guest of honor was Major General Charles P. Gross, chief of transportation, Army Service Forces, and presentation of diplomas was made by Colonel Bernard Lentz, Fort Slocum's commandant.

Officers of the Military Railway Service, for the most part, are commissioned directly from civilian life—on recommendation of the railroads which sponsor the various railway battalions. On passing the necessary physical examinations and otherwise qualifying for their responsibilities, these officers are sent to the school at Fort Slocum for an intensive course in the military virtues. The school does not give instruction in transporation work—a mastery of which its students are already presumed to have—but concentrates on military training, giving effect to the Army's policy of having all its men in uniform real shooting soldiers, able to defend themselves in all the exigencies of modern warfare—and not just civilians in uniform.

One of the continuously surprising features of the graduating exercises at the Slocum school is a demonstration by each graduating class of the skill in military drill and strenuous physical exercise which it has acquired during its brief course (usually four weeks). These men, ranging in age as high as 59 and averaging in the high 30's or low 40's, evidence a mastery of the vigorous and disciplined routine of the active soldier to a degree which would do credit to men of half their years.

CHESAPEAKE & OHIO—740th Ry. Op. Bn.

First row, left to right—1st Lt. John D. Reed (engr. & firem.); Maj. Jasper W. Knapp, Jr. (div. engr., trainm.); Lt. Col. Samuel H. Pulliam (trainm.); Maj. Paul E. Oakes (shop supr.); Capts. Crystal L. Andress (layerout); Stuart H. Poore (asst. div. eng.); Second row—1st Lts. Walter A. Johnson (tel. maint. & elec.); Willard E. Mason (ym.); Plynn J. Finch (loco. engr.); 2nd Lt. Wallace S. King, Jr. (draftsm.); 1st Lts. Benj. C. Magee (engr.); Todd C. Willis (engr.); Back row—1st Lt. Owen W. Draper (ym.); 2nd Lt. Harry E. Lewis (asst. car distr.); 1st Lt. Joseph F. Kelly (mach.); 2nd Lt. Ralph M. Carver (clk.); 1st Lt. Thos. W. McCrary (car forem.); 2nd Lt. Geo. A. Allen (bridge insp.); 1st Lt. Earl O. McKay (in absentia), (tr. dispr.).

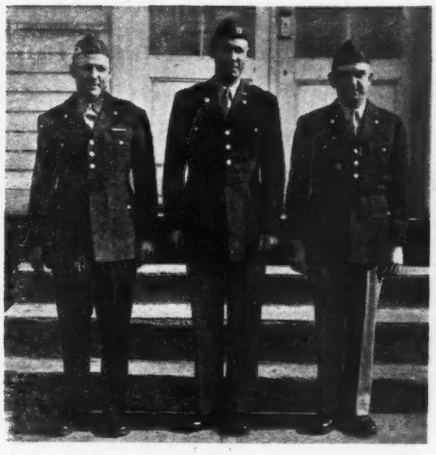
SEABOARD—722nd Ry. Op. Bn.

First row, left to right—Capt. Edmund H. Henson (supr. & op. dept.-cl. agt.); James R. Thorne (asst. supt.); Maj. Curtis A. McRee (supt.); Capts. Lynwood B. Alexander (r. h. forem.); Wm. C. McCormick (rm.); 1st Lt. Chas. E. Schofield (civ. engr.); Capt. Howard B. Agnew (tr. op.); Second row—1st Lts. Jesse R. Alcorn (rm.); Robert B. Waterman (sign. dept.); Mason L. Ellis (loco. engr.); Elmer H. Sebrell (mech. draftsm.); Carl C. Higgins (appr.); Third row—2nd Lts. James L. McBride (asst. div. engr.); Vernon G. Dyer (cons. sign. bridge trk.); 1st Lt. Warren D. Cake (gang forem.); 2nd Lt. Edward C. Miller (tr. dispr.); 1st Lt. Richard J. Holleman (ym.); 2nd Lt. Harry Hight (tr. rules exmnr.).

...lass of M.R.S. Officers

716th RY. OP. BN.

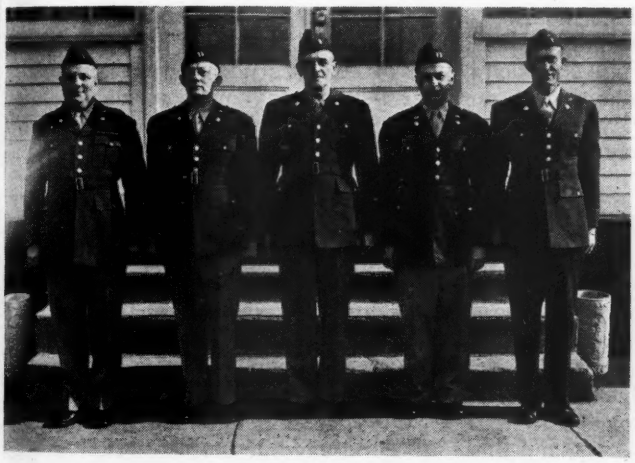
Left to right—1st Lt. Charles O. Arant (mach. & forem., Southern); Capt. Neander E. Peterson (rm., C. & I. M.); 1st Lt. Fletcher E. MacArthur (ry. sign. supr., Cent. Vt.).

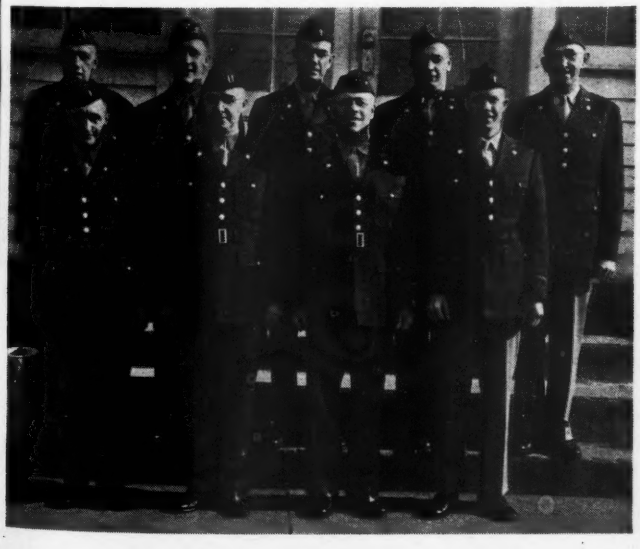


(Below)

723rd RY. OP. BN.

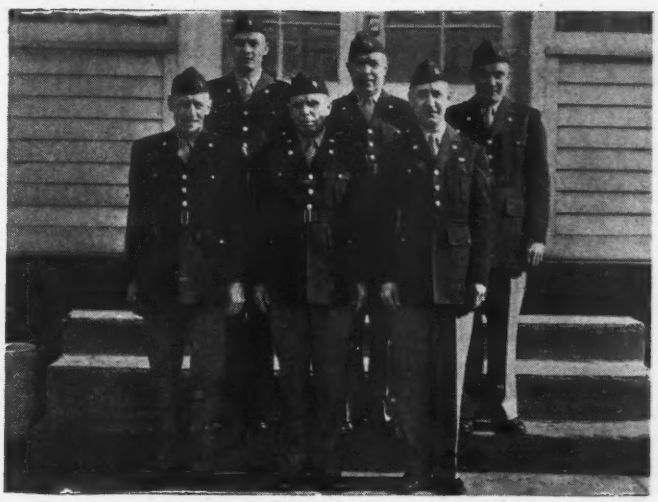
Left to right—1st Lt. Herman J. Fedore (loco. engr., N.Y.C.); Capt. Ennis J. Lumpkin (ch. clk. exec. dept., K. C. S. & L. & A.); Lt. Col. Doyle Gresham (ch. tr. dispr., U. P.); Capt. James L. Alvord (tr. supr.-asst. engr., Pere Marquette); 1st Lt. Geo. C. Tefertillar (trk. forem., Mo. P.).





743rd RY. OP. BN.

First row, left to right—1st Lt. Wm. R. Pruitt (motor car repairm., I. C.); Capt. Ralph H. Gandy (shop draftsm., B. & O.); Herman A. Rust (sta. m. & asst. trainm., I. C.); 1st Lt. Edwin L. Marsalis (asst. mech. inspr., I. C.); Back row—2nd Lts. John L. Simmons (sp. appr., I. C.); Edwin B. Robertson (asst. mach. forem., I. C.); 1st Lts. Robert Skinner (loco. engr., I. C.); Wm. M. Griffin (gen. forem., I. C.); 2nd Lt. Wm. H. Goold (asst. supr. trk., N. Y. C.).



710TH HQ. & HQ. CO., Railway Grand Div.

Left to right—1st Lt. Robert D. Anderson (ym., C. & N. W.); Lt. Col. Otto D. Crill (supt., A. T. & S. F.); Capt. Alexander S. Robertson (asst. to pres., Montour); 1st Lt. Pliney P. Pusser (P. & L. E.); Newell F. Herrick (transp. clk., D. & H.); 2nd Lt. Thos. A. Donohue (ym., D. L. & W.).

NEW YORK CENTRAL—718th Ry. Op. Bn.

First row, left to right—1st Lt. Gerald E. Chambers (asst. supr. trk.); Capt. Wm. G. Chase (trainm.); Maj. Lewis W. Moss (asst. engr. m. w.); 1st Lt. Willard E. Mason (asst. forem.); Capt. James L. Hartlaub (reg. supr.); Second row—2nd Lt. Fred M. Eusey (ym.); 1st Lts. Harry H. Fox (asst. term. forem. & mach.); Edgar R. Sims, Sr. (ym.); Albert H. Cieutat (sr. engr. & draftsm.); Back row—1st Lt. John R. Ragsdale (sign. forem.); 2nd Lt. Lee H. Benner (inspr.); 1st Lts. Geo. H. Bachert (loco. firem.); Vercil V. Crouch (loco. engr.).

744th RY. OP. BN.

Left to right—1st Lt. Edward Gongaware (ym., C. M. St. P. & P.); Capts. Wm. H. Hay (asst. engr. corps.-asst. supr. trk., P. & L. E.); Elbert F. Utter (inspr., N. Y. C.); 1st Lts. Matthew P. O'Loughlen (tr. dispr., C. M. St. P. & P.); Ferdinand A. Ziebell (forem., C. M. St. P. & P.); Back row—1st Lts. John D. Reed; Forest J. Hosler (firem. & engr., N. K. P.); 2nd Lts. Daniel Gerone (mech. inspr., N. Y., N. H. & H.); Foster J. Phillips (condr., C. M. St. P. & P.); 1st Lt. Robert A. Howell, Jr. (car inspr., Cen. of Ga.).

Factors in Motive Power Selection*

Of the many factors involved in the choice of motive power traffic density and initial cost are most important —Steam costs must drop to offset competitors' advantages

By Brig. Gen. C. D. Young (Retired)

Deputy Director, Office of Defense Transportation

THE factors that should be considered in the selection of railway motive power must be weighed carefully to arrive at a sound conclusion. Some of these factors are of interest to the president and to the board of directors, whereas others primarily concern engineering and operating officers in the management group.

The more important factors which should be given consideration are:

1.—The density of traffic per mile of road and the territory in which the locomotives are to be operated initially.

2.—As a corollary, it is important to consider, also, the density of traffic over the heavy rails in the operation of full-tonnage trains.

3.—The capital cost of alternative types of power, including the cost of lot sizes of steam locomotives and the availability of funds at the time of purchase.

4.—Crew wages and rules affecting cost of runs for locomotives of various types and various tractive force capacities.

5.—The time required for initial delivery and completion of the lot order.

6.—The cost of maintaining and servicing various types of motive power appropriate to each other and to the operation to which they are to be assigned.

7.—The probable maximum availability of the various types of locomotives (steam, electric, Diesel-electric) in service, measured in hours per day, week or month.

8.—As a corollary of the above, a determination of the time required for servicing different types of power, and of the possible need of additional facilities to service a new type of motive power.

9.—The cost of fuel (coal vs. petroleum) or electricity at the time of purchase, and the outlook for the cost of the future supply.

10.—The thermal efficiency of the fuel, where thermal efficiency is involved in the type selected.

11.—Desired novelty in design or type to attract public attention to the new motive power installed, to publicize the innovation.

12.—Relative obsolescence rate of the various types of power considered and possible disposition by relegation to less important service or sale.

These are the major factors which should be weighed. I will confine my remarks to two factors; namely, the density of traffic—primarily of road and territory in which the locomotives are to be operated—and the initial capital cost. I do this because a number of the other factors enumerated could be discussed more appropriately before other engineering group meetings rather than before one covering such a wide and diversified field as do the joint Societies present here today.

[At this point the speaker referred to a chart which had been prepared by the Office of Defense Transportation showing the traffic density of roads in northeastern United States for the year 1929 to illustrate the necessity of considering this factor in the long-range planning for motive power selection. He also pointed out that surplus capacity of hydro-electric power generating stations, in the post-war period, may make available electrical energy at low cost, particularly in the West, which may influence electrification.—EDITOR]

25 Per Cent of Capital Investment for Power

It is important in a discussion of cost as a factor in choice among alternative types of locomotives to review the gross capital expenditures for motive power by the railways of the United States during the six years ending with 1942, the latest year for which figures are available. (These figures are shown in Table I.) The total sum spent from 1937 to 1942 amounted to 391 million dollars, and this sum represented 25 per cent of the gross capital expenditures by the carriers during those years for all estimated needs. Sixty-two per cent of the period total was expended for freight cars and the remainder for trackage, communication and signals, and miscellaneous requirements. The average annual outlay in this period for locomotives was 65 million dollars; the smallest expenditure was in 1938 when 40 million dollars were spent, and the largest amount expended was 114 million in 1942. This is a sizable sum and stresses the importance of discussion on this third factor, the unit cost of the locomotives acquired through such capital expenditure.

It is impossible that, had it not been for war—first threatened and then realized—so great a sum as 391 million dollars would have been spent upon motive power in the years 1937 to 1942, inclusive. The figure does give an idea of the importance of locomotive unit costs and indicates the significance of seeking in every possible way to discover methods of reducing those costs—in the interest of both builder and buyer.

It does not seem appropriate to discuss the actual financing problem of such a sizable sum and the relation of the unit cost of the locomotive to favorable equipment trust terms and conditions. Further, you all know as well as I the various major charges that enter into the cost of manufacturing, including a fair profit, so I shall make no mention of them. I shall, in fact, confine my remarks to but a single factor, and a most important one, which seriously affects the cost of manu-

* Abstract of an address made before a session of the annual meeting of the American Society of Mechanical Engineers sponsored by the Railroad and Oil-Gas Power Divisions of that society and the Committee on Land Transportation of the American Institute of Electrical Engineers, held at the Hotel Pennsylvania, New York, December 1, 1943.

Table I—Gross Capital Expenditures For Selected Items—Class I Railways

Year	Locomotives	Per cent of total	Freight cars	Per cent of total	Additional main track	Per cent of total	Yards and sidings	Per cent of total	Signals and interlockers tel. & tel. etc.	Per cent of total	Total	Per cent of total
1937	$ 59,738,000	19.9	$212,902,000	70.9	$2,912,000	1.0	$14,593,000	4.8	$10,281,000	3.4	$ 300,426,000	100.0
1938	39,570,000	37.1	52,814,000	49.5	2,185,000	2.0	7,569,000	7.1	4,643,000	4.3	106,781,000	100.0
1939	42,807,000	32.9	66,779,000	51.3	3,308,000	2.6	10,459,000	8.0	6,741,000	5.2	130,094,000	100.0
1940	54,351,000	20.0	189,629,000	69.8	3,385,000	1.2	14,233,000	5.2	10,275,000	3.8	271,873,000	100.0
1941	80,607,000	21.9	245,713,000	66.6	3,781,000	1.0	25,374,000	6.9	13,439,000	3.6	368,914,000	100.0
1942	113,834,000	29.9	201,112,000	52.8	6,235,000	1.6	43,330,000	11.4	16,261,000	4.3	380,772,000	100.0
Total	390,907,000	25.1	968,949,000	62.2	21,806,000	1.4	115,558,000	7.4	61,640,000	3.9	1,558,860,000	100.0
Average	$ 65,151,167	25.1	$161,491,500	62.2	$3,634,333	1.4	$19,259,667	7.4	$10,273,333	3.9	$ 259,810,000	100.0

Source: Association of American Railroads—Review of Operations in 1942.

facturing—the lot size of an individual or a group order for a particular locomotive. These lot sizes are determined fundamentally by customer judgment of need; nevertheless, such judgment normally is strongly influenced by the individual engineering originality of the chief of the mechanical organization of the purchaser, as well as by the activity of the locomotive builders and locomotive specialty concerns—these, through sales organizations, urging individual designs intended to give them a favorable competitive position with prospective customers.

Purchasers of Steam Power Are Individualistic

The marked individualism characteristic in locomotive purchasing as displayed by both buyer and seller is well illustrated by the specifications of locomotives built in the twelve months, October 1, 1942, to September 30, 1943. The chief characteristics of those locomotives appear in Table II. As you will observe, this record covers steam locomotives only. A high degree of standardization of other types of locomotives, both Diesel-electric and electric, has been developed in recent years; with these, variety of design is not great. They are generally built on the production line.

Looking at the chief characteristics, you will observe that in wheel arrangement alone a wide variety of design was purchased. One hundred and seventy units were of the 2-8-2 or 4-8-2 or 4-8-4 type; 87 units were 2-10-4's; 90 were 2-6-6-2 or 4-6-6-2 or 4-6-6-4's, simple; 40 were 2-8-8-2 or 4-8-8-2 or 4-8-8-4's and the 18 others, of 405 built, were miscellaneous. Of the largest lot noted above the group of 170 units having eight drivers, 100—almost 25 per cent of the total—were 4-8-4's and these were, with the exception of five, purchased by 10 railroads from three builders. These five were built in a railroad shop in accordance with the designs of one of the builders.

In wheel arrangement these 100 locomotives are similar, but there similarity ceases, as is so clearly shown in the Table III. In this table, I have listed only this group of 4-8-4's, showing separately the characteristics of each of the ten lots. In the preparation of this table it was my purpose to determine whether the number of different designs with the same wheel arrangement could be substantially reduced. I believe that such reduction is possible, yet the need of each of the railroads be met. Indeed, it appears that such need might be met by two designs instead of 10, thus making potentially possible decreased manufacturing costs.

You will observe that as to axle load, there is a 65 per cent variation between the minimum and maximum, when average axle load is compared with the average weight of rail per yard in the case of each railroad. Undoubtedly, bridge strength and condition are in part responsible for this variation. On the other hand, it is evident that full advantage of rail strength has not been taken by some of the railroads in fixing upon the tractive force and weight on drivers of locomotives purchased. To illustrate, Railroad C, with an average weight of rail per yard of 192 lb., has been satisfied to secure locomotives with little greater traction force than that of locomotives purchased by Railroad H, with an average weight of rail per yard of 83 lb.

In drawing your attention to the next variation, it would be better in making this comparison if data had been available of a drawbar pull-speed curve rather than making a comparison of tractive force. However, merely as illustrative of the wide difference between locomotives of substantially the same hauling capacity, it is to be observed that there is a variation of 34 per cent in the ratio of grate area to total evaporative heating surface and, curiously enough, that the tractive force of the locomotive with the highest ratio of heating surface to grate area, Railroad J, is less than the locomotive with the lowest ratio, Railroad B. This suggests that so far as the boilers of the 10 different locomotives built are concerned, there is little relationship in the designs between the hauling capacity, boiler capacity and grate area, and although one would expect to find some variations due to the characteristics of the roads over which the locomotives are to operate, and the character of the fuel, there should not be such violent differences as are seen here. This points to the next ratio analysis.

Upon the basis of computations made, it appears that there is a variation of 31.9 per cent in square feet of heating surface per million cubic inches of cylinder displacement per mile of operation, and that variation between the minimum and the maximum of the 4-8-4 locomotives is between design A and D in the higher tractive capacity group. It appears further that the locomotive with the greatest tractive capacity, that purchased by Railroad D, has the lowest heating surface in relation to cylinder and driver size, and this is compensated for only in part by the higher boiler pressure and maximum heating surface to supply the cylinders of the Railroad A locomotive.

Two Designs Would Have Sufficed

Many other comparisons could be offered, but these emphasize the variations sufficiently. I believe, and raise questions as to their economic justification. While this discussion is in no sense a criticism of any particular one of the designs, it does seem there was little warrant for the wide variations shown. These 100 locomotives might well have been built to two designs, I believe, had the matter of design been reviewed carefully by those especially qualified and had there been a genuine determination on the part of these engineers to reduce the manufacturing cost through standardization. In one group might well have fallen the locomotives built for roads A, B, and D, locomotives of high tractive force; in the other, those of medium tractive force built for the other roads. Certainly, if two designs could have been substituted for the 10, the unit cost per pound of pro-

ducing these locomotives would have been materially less and manpower saved.

If a considerable number of locomotives of a single design are ordered, construction can be put upon a production-line basis. Furthermore, standardization will permit material reductions in machining costs, for then the builder will be justified in acquiring specialized tools to produce particular parts of the locomotive, even though the capital outlay for such tools may be heavy. The advantage here is clearly evidenced by the machine-tool practices of the Diesel-electric builders using special and automatic tools. With standardization of design should be developed also standardization in specifications for materials entering into locomotive construction, as these have an effect upon both inventory of manufacturers and final cost to them.

A Needless Handicap to Steam Power

If the steam locomotive is to continue to hold its "place in the sun," it should not be handicapped in competition with those other forms of heavy traction units which have come into general use. Yet, in an era of mass production, the steam locomotive now finds itself so handicapped, despite its magnificent past performance, and handicapped needlessly in part. Is it unreasonable to suggest that the individualism of engineering involved in buying and selling steam locomotives be kept within such limits that this type of power may be adapted in considerable degree to mass production and thus benefit from the lower cost which will result? Competition among steam locomotive specialty manufacturers has also tended to encourage the continuance of custom manufacture of steam locomotives; they should recognize the danger of excessive individualism in locomotive building, just as builders and carriers, and they should seek to put the manufacture of specialties upon a mass production basis, just as designers should seek to do for the complete unit. The friends and champions of the steam locomotive can do much to aid it in maintaining and important place upon the railroads of the United States.

Will they make the minor sacrifices, take the effort requisite to attain that major end?

I hope this discussion may be fruitful of further thought. It is a most important subject. It is one of the factors that seriously affects the future of the steam locomotive, namely, its ever-increasing poundage cost and horsepower cost against the competition of electric and Diesel-electric locomotives.

Table II—Principal Characteristics of Steam Locomotives for Class I Railroads from October 1, 1942, to September 30, 1943, Inclusive

Builder	Railroad	No. built	Wheel arrangement	Weight of engine, lb.	Combined heat. surf., total, sq. ft.	Cylinders, diameter and stroke, in.	Maximum tractive force, lb.
American	B. & L. E.	4	0–8–0	279,000	3,931	25 x 30	64,300
Lima	C. & O.	8	0–8–0	244,000	3,237	25 x 28	57,200
Baldwin	L. & N.	6	2–8–4	447,200	6,562.3	25 x 32	65,290
Lima	N. Y. C. & St. L.	10	2–8–4	421,000	6,704	25 x 34	64,100
Lima	R. F. & P.	10	2–8–4	433,200	6,704	25 x 34	64,100
Baldwin	B. & L. E.	2	2–10–4	524,440	8,278	31 x 32	96,700
Penna.	Penna.	85	2–10–4	578,000	9,498	29 x 34	95,000+15,000 booster
N. & W.	N. & W.	15	2–6–6–4*	573,000	9,342	24 x 30	114,000
Lima	C. & O.	9	2–6–6–6*	724,500	10,426	22½ x 33	110,200
N. & W.	N. & W.	5	2–8–8–2†	582,900	7,422	25 and 39 x 32	152,206 (126,836 compound)
Baldwin	D. M. & I. R.	10	2–8–8–4*	699,700	9,528	26 x 32	140,000
Ill. Cent.	Ill. Cent.	20	4–8–2	423,893	6,830.2	28 x 30	83,160
Lima	N. Y. C.	25	4–8–2	397,300	6,779	26 x 30	59,900
Lima	Cent. of Ga.	8	4–8–4	437,800	6,420	27 x 30	62,200
American	D. & H.	15	4–8–4	470,000	5,950	24½ x 32	62,040
Baldwin	Mo. Pac.	15	4–8–4	489,000	7,506	26 x 30	67,200
American	N. C. & St. L.	4	4–8–4	399,000	5,924	25 x 30	57,000
Baldwin	Nor. Pac.	10	4–8–4	508,500	6,602.7	28 x 31	69,800
Baldwin	R. F. & P.	6	4–8–4	408,400	5,619	27 x 30	62,800
Baldwin	St. L.-S. F.	21	4–8–4	462,500	6,274	28 x 31	71,200
St. L. S. W.	St. L. S. W.	5	4–8–4	425,500	6,686	26 x 30	61,564
Lima	So. Pac.	10	4–8–4	468,400	6,938	27 x 30	64,200+11,300 booster
Lima	West. Pac.	6	4–8–4	466,100	7,008	27 x 30	64,200+11,300 booster
American	Clinchfield	8	4–6–6–4*	607,000	7,072	22 x 32	101,120
American	D. & H.	15	4–6–6–4*	597,000	7,070	20½ x 32	94,400
American	D. & R. G. W.	6	4–6–6–4*	630,000	6,957	21 x 32	97,350
American	No. Pac.	12	4–6–6–4*	644,000	7,854	23 x 32	106,900
American	U. P.	25	4–6–6–4*	633,500	6,957	21 x 32	97,350
Baldwin	So. Pac.	30	4–8–8–2*	657,900	9,096	24 x 32	124,300

* Simple. † Compound.

(Note—Prepared by Division of Materials and Equipment, O.D.T., from information furnished by Division of Railway Transport of O.D.T., Transportation Equipment Division of W.P.B., and locomotive builders.)

Table III—Variations in Characteristics of Type 4-8-4 Steam Locomotives Built from September 1, 1942, to September 30, 1943, Inclusive

Railroad	Weight of engine, lb.	Average weight of rail, lb. per yard	Average weight on axle, lb.	Average axle load per average weight of rail, lb. per yard	Evaporative heat. surf., sq. ft.	Grate area, sq. ft.	Sq. ft. heat. surf. per sq. ft. of grate area	Diameter of drivers, in.	Cylinders, diameter and stroke, in.	Cylinder displacement per mile—million cu. in.	Sq. ft. heat surf. per thousand cu. in. cylinder displacement per mile	Steam pressure, lb. per sq. in.	Maximum tractive force, lb.
A	489,000	88	69,800	793	5,306*	106.0	50.1	73	26 x 30	17:6	302*	285*	67,200
B	508,500	88	73,800*	838*	4,672.7	115.0*	40:6†	77*	28 x 31	20.0	234	260	69,800
C	408,400	129*	65,800	510†	4,294	86:5	49.6	77*	27 x 30	18.0	239	260	62,800
D	462,500	87	70,000	805	4,766	88.0	54:2	74	28 x 31	20:8	229†	255	71,200*
E	425,500	84	62,000	738	4,724	88.3	53.5	70†	26 x 30	18.4	257	250	61,564
F	470,000	102	67,500	662	4,477	96.2	46:5	75	24½ x 32	16.2	276	285*	62,040
G	399,000	90	57,000†	633	4,203†	77.3†	54.4	70*	25 x 30	17.0	247	250†	57,000†
H	437,800	83†	64,500	777	4,707	90.4	52:1	73½	27 x 30	18.9	249	250†	62,200
I	468,400	97	70,800	729	4,852	90.2	53.8	73½	27 x 30	18.9	257	260	64,200‡
J	466,100	98	70,300	717	4,922	90:2	54:6*	73½	27 x 30	18.9	260	260	64,200‡
Variation between minimum and maximum, per cent				64.3	.....	.....	34.5	10.0	.....	....	31.9	14.0	24.9

* Maximum. † Minimum. ‡ Booster tractive force, 11,300 lb., not included.

Favors a Uniform Classification

Proposed report in 28310 would have I. C. C. require railroads to adopt for country-wide application a new set of ratings, embracing 30 classes designated in percentages of present class 100 with range from class 400 to class 11

WASHINGTON, D. C.

ESTABLISHMENT of a uniform freight classification with ratings applicable throughout the country has been recommended to the Interstate Commerce Commission in a proposed report submitted by Examiners Paul O. Carter and William J. Koebel in the No. 28310 investigation of the Consolidated Freight Classification. The examiners' proposals would set up 30 classes, designated in percentages of the present first class, or class 100, with a range from class 400 to class 11; seven classes would be above 100 and 22 below.

It would leave to the railroads the task of unifying unlike ratings of the present Official, Southern, and Western classifications, directing them to make their submissions within six months after service of the order; or to show cause why uniformity should not be accomplished in accordance with a method set out in the proposed report. "The ultimate object," the report says, "is that the ratings should be required to be made effective coincidentally with the class rates that may be prescribed in docket No. 28300, which rates the recommended uniform classification should govern."

Intended to Cover Whole Country

In the latter connection, the examiners point out that the two proceedings do not tie in completely, 28310 being country-wide in scope whereas 28300 does not bring into issue the class rates applicable in mountain-Pacific territory and through rates between that territory and the remainder of the United States. Nevertheless, the uniform classification they recommend "is intended ultimately to cover the whole United States."

The proposed report emphasizes at its outset that it represents "the independent views, judgment, and recommendations of the examiners," and that "nothing herein has been directed or suggested by the commission or a division thereof, or by any member of the commission." Exceptions will be due January 15, 1944, and and replies to exceptions on January 31, 1944.

Railroad presentations in the proceeding have thus far taken the position that complete classification uniformity is "impracticable," and this stand has been supported generally by shippers and public officials in Official territory, and by important shipping interests elsewhere, including the Southern States Industrial Council. This point of view did not appeal to the examiners when they found it "clear" that the existing classifications "are outmoded and should be revised."

Neither did they agree with conclusions reached in the study entitled "Some Suggestions for Improvement in Railroad Class Rates," which was prepared by a member of the commission's staff and submitted in evidence. As the examiners described it, this study contains "principally suggestions for revisions of the boundaries of the major freight-rate territories, and for reductions in the levels of the intra and interterritorial rates," the author believing that no revision of the classification should be attempted until revision of the class rates has been completed. Then his approach to classification revision would be to substitute the exceptions for the classification ratings, subject to whatever adjustments might be necessary to preserve revenue; for it is his opinion "that in reality the exceptions in all territories constitute the classifications and that the truly exceptional traffic is that which moves at ratings in the classifications."

Reject Extending Official Classification

Likewise rejected were the contentions of those who had suggested extension of the Official Classification to other sections of the country. Aside from a formula developed by motor carrier interests and appraised by the examiners as "not practicable," this idea of extending the Official Classification was the only specific suggestion received on the matter of uniformity. And many of those who advanced it, including the Southern Governors' Conference, were putting it forward only as a temporary expedient to be adopted until such time as a uniform classification could be developed.

The chief urge behind this suggestion, the examiners pointed out, is the belief that the Official Classification "is generally more favorable to shippers on traffic that still moves subject to classification ratings." But Messrs. Carter and Koebel could not find in it "virtues transcending those of other classifications." In evolving their recommended uniform classification, they proceeded to give consideration to the three major classifications—Official, Southern, and Western. The Illinois Classification was not dumped into the melting pot, "because its ratings are merely derived from the major classifications."

As the examiners read them, the present Official, Southern, and Western classifications provide 27, 28, and 26 classes, respectively, counting classes of all kinds above and below class 100, but counting only once equivalent regular and percentage classes. The range is from classes 400 to 17½, the highest and lowest in each classification, except that in Official the lowest is 20. In the different rate territories, the ratings provided in exceptions to the classifications "vary from 85 to at least 130 miscellaneous percentages of class 100, which include those used also for ratings published in the classifications."

Analysis of the present set-up convinced the examiners that there was need "from a practical standpoint" for "like classes in all territories." Also, "more classes for the articles now rated lower than class 100 are required, as evidenced by the number of percentage ratings in the present classification in addition to the regular classes, in order to allow for greater refinement in rating articles."

Coming to the question of which should be class 100 in their proposed classification, the examiners pointed

out that any one of the 30 classes might be so designated; but they knew of "no sound reason or advantage in disturbing the present class 100, with which and the classes related thereto all concerned are familiar." Moreover, "it is the highest among the classes that embrace an important number of ratings, and accounts for over 11 per cent of the total ratings in the present classifications."

Also accepted by the examiners are the present seven classes higher than class 100, but they stipulate that all classes should be stated in percentages and that "numbers, letters, and designations other than percentages be disapproved." The 30 percentage classes recommended are as follows: 400, 300, 250, 200, 175, 150, 125, 100, 92½, 85, 77½, 70, 62½, 55, 50, 45, 42½, 40, 37½, 35, 32½, 30, 27½, 25, 22½, 20, 17½, 15, 13, and 11.

On the matter of assigning individual articles to the above classes, Messrs. Carter and Koebel found the record "devoid of evidence" that would enable the promulgation of a rule evaluating the weights that should be given to various pertinent factors. As noted above, they would give the carriers a chance to do that job. They nevertheless took occasion to distinguish between "classification principles," which they think should be considered, and other factors which they regard as improper bases for different territorial ratings.

Among the latter are competition, variations in territorial rate levels, and differences in the composition of traffic. Competition, as the examiners see it, may justify exceptions to the classification, but "it has not been shown to be coextensive with classification territories." Thus "in the process of providing classification ratings for an entire territory, it is improper to give competition any weight."

Should Not Be Used to Adjust Rates

With respect to differing classifications based on varying class-rate levels, the examiners assert that "classifications are not the correct media for remedying inequalities in territorial class-rate levels, which should be accomplished by modifying the rates themselves." And territorial differences in ratings, based on the fact that an article moves in large volume in one territory as a whole and in smaller volume in the other, cause "undue preference and prejudice between the shippers in the two territories, as well as between the traffic and the territories."

The examiners concede that the foregoing factors may justify exceptions to the classification or special commodity rates; but they find it difficult to understand how they would justify a special rating throughout an entire territory. "It would be unusual if the justifying conditions ended abruptly at the territorial boundaries," they say.

Meanwhile, the "well-known classification principles or elements, which recognize distinctions from a transportation standpoint along fairly broad lines," and thus qualify for consideration in the assignment of articles to various classes, are listed by the examiners as follows: Weight per cubic foot and value per pound as packed for shipment; liability to loss, damage, waste, or theft in transit; likelihood of injury to other freight with which it may come in contact; risks due to hazards of carriage; kind of container or package as bearing upon the matter of liability or risk; expense of, and care in, handling; ratings on analogous articles; fair relation of ratings as between all articles; competition between articles of different description but largely used for similar purposes; commercial conditions and units of sales; trade conditions; value of service; volume of movement for the entire country in either less-carloads or carloads; adaptability of movement in carloads; carload minimum weights just to carriers and shippers.

Should Aim at Averages of Present Ratings

"These transportation characteristics," the report adds, "would be substantially similar on most articles irrespective of the territory in which the movement occurs. . . .

"In unifying unlike ratings, and placing them in the stated 30 classes, the aim should be to arrive at ratings that do not exceed an approximate average of the present ratings in the three major classifications, but where in any one territory the particular article moves entirely or almost entirely under exceptions that are below the classification rating, the exception rating ordinarily should be regarded as the rating in that territory. Where it is known that the preponderance of the tonnage of a certain article moves in one or two territories, the ratings in those territories should be allowed greater influence in determining the uniform rating. In dealing with the carload ratings, if the present minimum weight in one territory is materially different from that in another, this fact should be given consideration in determining the uniform rating. One important objective in the revision should be the evolvement of ratings under which will move a much larger proportion of the traffic than at present, and which will make possible the cancelation of many exception ratings and commodity rates.

"Present classification ratings, uniform only nominally because unused due to lower exceptions, should be subjected to similar scrutiny with a like view, so that the resulting uniform classification may be of practical utility and not merely theoretical as is now true with regard to a large proportion of the articles. The greater number of classes recommended, which split certain wide spreads between present classes and offer three classes below the present lowest, should make feasible the cancelation of many exceptions of territory-wide application."

In driving toward their objective, the examiners found it unnecessary in this proceeding to heed railroad pleas that revenues would be adversely affected if future uniformity conforms to the pattern of the past and is accomplished by shifts which produce rate reductions. "Sufficient revenues to maintain and operate the carriers are of course essential," the report concedes, "but their needs should not be satisfied by practicing undue preferences and prejudices in ratings such as are shown by the evidence. The revenues required should be provided by rate levels high enough to produce funds for their needs, and not by resort to increases in classification ratings that cause unlawfulness. The aim for uniformity is not merely for the sake of uniformity, but to remove the resulting unjust differences in rates."

Think Increases and Cuts Will Be Offsetting

At the same time, Messrs. Carter and Koebel reflect a confidence that their proposal will even things up pretty well. "Under our recommendations," they say, "the rating in one territory may be reduced, but in another increased; and in the same territory the rating on one article would be reduced but on another increased. Only the small proportion of total traffic that now moves on classification ratings would be affected by the classification changes. The cancelation of many exceptions,

and possibly commodity rates, would produce some increases. While shippers interested in class rates subject to the present classification would suffer some increases, probably most of them would benefit from reductions. Any case of actual hardship or unlawfulness in individual instances may be brought to the attention of the commission."

The proposed report, with its appendices, covers 75 mimeographed sheets. It recalls how the proceeding, along with 28300, was instituted by the commission in July, 1939, "in response to expressions of dissatisfaction with the classifications of freight and the levels of interterritorial and intraterritorial rates on class-rate traffic, particularly from interests in the southern and southwestern sections of the country."

Then in turn come a discussion of the interstate application of the present classifications, and a review of I. C. C. efforts to advance uniformity. Such efforts are found to have had their inception in the commission's first annual report of 1887, and to have been more or less continuous since that time. A landmark was the publication, effective December 30, 1919, of the Consolidated Classification with its descriptions of all articles of commerce, including kind of shipping container or nature of packages contemplated by the ratings, and rules and package descriptions, that are uniform in all classifications. But, as the examiners put it, the Consolidated Classification's showing of the Official, Southern and Western ratings in parallel columns serves "in striking fashion to bring inconsistencies to the attention of shippers and carriers." And this has become a "strong influence toward uniformity."

Much Uniformity Already Achieved

In the latter connection, the proposed report publishes a table which shows that there is at present a grand total of 20,878 ratings, 12,554 or 60.13 per cent of which are already uniform in the three classifications. L. c. l. ratings make the best showing, 8,622 or 85.08 per cent of the total (10,134) being uniform. Next comes the any-quantity ratings where 80 per cent (64 out of 80) are uniform. Of the 10,664 carload ratings, however, only 3,868 or 36.27 per cent are uniform in all classifications. As the examiners later sum it up, "there is now substantial uniformity in classification rules and descriptions and in ratings of class 70 and higher." They concede, however, that much of it "is theoretical rather than actual, in that . . . exceptions . . . provide literally thousands of lower ratings on the same articles."

Nevertheless, they insist that "the fact that uniformity has progressed to the present degree is proof that it should be practical as to all articles."

They would have the commission lay the groundwork for adoption of their proposal with a finding that present ratings "for the future will make, give, and cause undue and unreasonable preference and advantage to persons, regions, districts, territories, and particular descriptions of traffic that have the benefit of ratings on article descriptive items or subitems, in any-quantity, less-carloads, or carloads, in any of those classifications which authorize class rates relatively lower, considering a lawful class-rate level or levels in the respective regions, districts, and territories, and on particular descriptions of traffic, than are afforded by ratings in the other of the major classifications." This would be followed by another finding that such undue and unreasonable preference would be removed by publication of the recommended uniform classification.

Meanwhile, the examiners had disposed of the contentions of the railroads and certain other parties to the effect that the commission cannot in the present proceeding require a change in any of the classification ratings, because no evidence was received concerning individual articles.

Insist Commission Can Make General Findings

"Abundant evidence," the report says, "has been received showing that the differences in classification ratings compel shippers in each of the classification territories to pay on certain articles transportation rates that are relatively higher than the rates paid on the same articles by shippers in one or both of the other territories, considering present class-rate levels in the respective rate territories. In fact, on many articles a shipper in a lower-rated territory must pay higher rates than one in a higher-rated territory, due to differences in classification ratings. The showing made is typical of the entire situation at present, and would continue so with whatever rate level or levels the commission may find lawful in docket No. 28300 or in any other proceeding. The duty is not imposed upon the commission in a proceeding of this character to receive and consider evidence as to each of the more than 20,000 less-carload and carload ratings in the classifications, and to find as to each of them whether the rating is lawful. General findings may be made as to classifications and territories as a whole. No adequate justification has been offered for the wholesale advantages and disadvantages resulting from the classification differences."

The "Right" to Strike

"The 'right to strike' is among those which the preamble of the Declaration calls 'unalienable.' So much is, no doubt, clear. But none of these rights has ever been regarded as *absolute* against the community. A person's life, liberty and his opportunity to pursue happiness have always been taken from him when it was necessary to do so to preserve the lives, liberties and opportunities to pursue happiness of his fellows. At this very moment at least ten millions of our fellow citizens have actually been deprived of all three rights and, for good measure, we have all been deprived of a goodly share of our property—all because of the deadly danger to the whole people. No one questions the need for this proceeding, nor its justice. *Salus populi suprema lex*—'the people's safety is the supreme law,' and always has been for it has to be. . . .

"The essence of patriotism is a sense of duty and that sense of duty is firmly rooted in our national consciousness so far as the sacrifice of life in the country's defense is concerned. . . . We have learned to subordinate a man's 'right to life' to the national 'right to safety'; we have not yet learned to subordinate a man's 'right to strike' to anything—not even to the national right to safety. We have, so far, admitted that 'right' to be absolute, the only one of its kind in our system.

"The only justification possible for such a 'right' would be the absence of any other means for ascertaining and securing justice in employer-employee relations. But we have precisely the same means for doing so in their case as we have in all other human relations. . . . We have all the machinery for ascertainment of facts concerning wages and working conditions. Not only is this so but we have the means for enforcing the demands of justice so ascertained *upon the employer*. . . ."

—Thomas F. Woodlock in the Wall Street Journal.

Project at Roanoke Gives Bigger and Better Yard Facilities

Efficiency and capacity of Norfolk and Western terminal are greatly enhanced as a result of recently-completed project costing $5,000,000

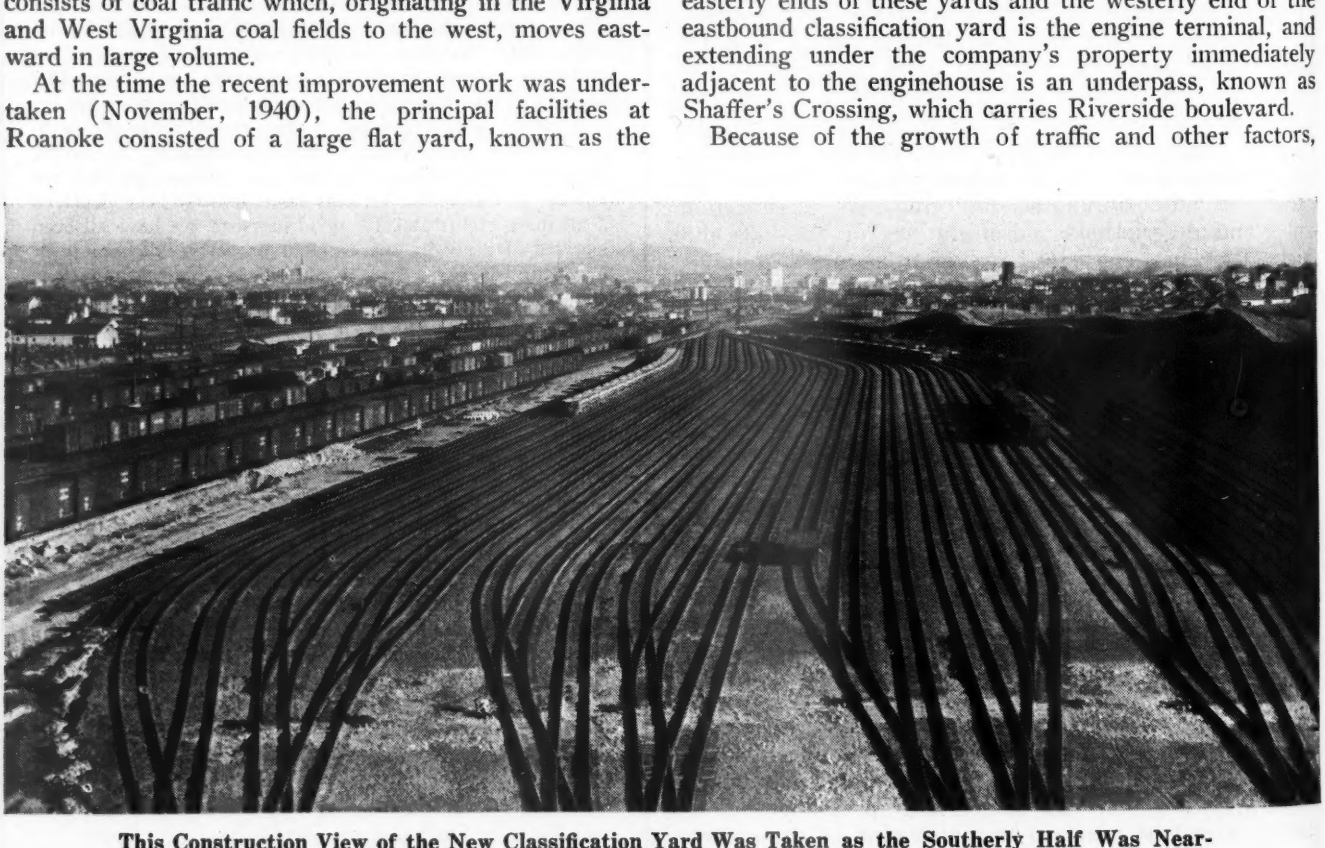
TRAFFIC moving through Roanoke, Va., on the Norfolk & Western is now being handled more efficiently and expeditiously than ever before as the result of the recent completion of a comprehensive improvement and expansion project involving the company's extensive yard facilities and locomotive terminal at that point. Thus, the completion of this undertaking has been an important factor in enabling the N. & W. to handle its share of the burden of war traffic with maximum efficiency. Carried out at a total cost of about $5,000,000, the project involved the construction of 66 miles of new trackage and 1,623,000 cu. yd. of grading.

Roanoke is an important terminal point on the main line of the N. & W. which extends between Norfolk, Va., at tidewater, on the east, and Cincinnati, Ohio, and Columbus on the west. Contributing to this importance is the fact that the main line is joined at Roanoke by two secondary main lines, one extending northeastward to Hagerstown, Md., and the other southward to Winston-Salem, N. C., these lines together forming the Shenandoah division. A substantial portion (about 40 per cent) of the loaded movement that is handled at Roanoke consists of coal traffic which, originating in the Virginia and West Virginia coal fields to the west, moves eastward in large volume.

At the time the recent improvement work was undertaken (November, 1940), the principal facilities at Roanoke consisted of a large flat yard, known as the Park Street yard, used principally as a switching and classification yard for westbound traffic, other than empty coal cars; a yard for handling empty coal cars moving westward to the coal fields; an eastbound receiving yard; and an eastbound gravity classification yard. There is also an extensive engine terminal embodying a 40-stall enginehouse, and a car-repair yard.

These facilities occupied a strip of property about three miles long, extending westward from Park street to and beyond the westerly outskirts of the city, this strip being skirted on the north and south by the westbound and eastbound main lines, respectively. The most easterly of the yard facilities was the Park Street yard. Adjacent to this facility on the west and overlapping it somewhat was the eastbound classification yard, containing 19 tracks. To the west of this latter yard, and parallel with each other, were the westbound empty-car yard on the north and the eastbound receiving yard on the south. Of these, the former contained 10 tracks with capacities for handling 75 to 80 cars, while the eastbound receiving yard had 17 tracks with capacities up to about 65 cars. Occupying an area between the easterly ends of these yards and the westerly end of the eastbound classification yard is the engine terminal, and extending under the company's property immediately adjacent to the enginehouse is an underpass, known as Shaffer's Crossing, which carries Riverside boulevard.

Because of the growth of traffic and other factors,



This Construction View of the New Classification Yard Was Taken as the Southerly Half Was Nearing Completion—The Old Yard, to Be Replaced by the Northerly Half of the New Yard, Is at the Left

Left—A Portion of the New Eastbound Classification Yard As Seen from One of the Control Towers. Right—Looking Eastward from the Hump of the New Classification Yard. Building at Left Is Hump Yardmaster's Office

these facilities had become inadequate in recent years to handle the business at Roanoke with maximum efficiency. The eastbound gravity classification yard, for instance, was not a modern facility, requiring the use of car riders, and was limited as to capacity, especially in view of the fact that it was desired to transfer to Roanoke certain eastbound classification work involving coal traffic that was being done elsewhere. Similarly, the westbound empty-car yard and the eastbound receiving yard were considered inadequate both as to their total capacities and the lengths of the individual tracks comprising them, it being necessary frequently to double long trains to get them into the yards. Also, it was recognized that the facilities and arrangements at the engine terminal were in need of modernization to permit locomotives to be handled with maximum efficiency.

Several years ago, therefore, it was decided to undertake a general improvement program looking to the enlargement and modernization of all the principal components of the Roanoke yard, including the engine terminal, except the Park Street yard, which was considered adequate. Briefly stated, the program envisaged the replacement of the existing eastbound gravity classification yard with a new, larger and highly modern facility with a forwarding yard; the construction of an extension to the westbound empty-car yard, retaining the same number of tracks; the construction of an extension to the eastbound receiving yard and the provision of a number of additional tracks in this yard; and the modernization of the engine terminal on an extensive scale, including the construction of extensions to 16 of the enginehouse stalls. The present article is confined to a description of that part of the project involving the different freight yards, and the work incident thereto; because of the scope of the engine-terminal improvements, this work will be described in a separate article to be published in a subsequent issue.

The Classification Yard

The new eastbound gravity classification yard is the most outstanding feature of the improvement work. Whereas the old gravity yard contained only 19 tracks, this new yard has 46 tracks, with capacities ranging from 22 to 40 or more cars. A portion of the new yard is located approximately on the site of the old facility, but because of its greater width, more than half of it occupies a newly-graded area along the south side of the site of the old yard. At the west end of the new classification yard is a double-track hump which, as to grades, layout, equipment, communications and signals, is modern in every detail. One of the hump tracks serves a group of 22 classification tracks, and the other a group of 24 tracks, although the presence of a double scissors crossover between the two hump leads makes it possible to divert cars from either hump track to the other. Near the bottom of the hump grade each of the hump leads divides into four secondary leads, each of which, in turn, serves a group of six tracks, except that two of these groups have five tracks each. From each hump track, a run-around or interchange track extends westward around the hump to the receiving yard.

Coming out of the eastbound receiving yard, the hump tracks are on a grade of 0.4 per cent, which changes to a grade of 2.4 per cent as they ascend the westerly slope of the hump, this latter grade having a length of 445 ft., measured between the points of intersection of the grade lines. From the apex of the hump the tracks descend on a separation grade of 2.6 per cent for 114 ft. On this portion of the slope there is a single-section electro-pneumatic car retarder on each track. Each of these retarders is 34.5 feet long and has five cylinders on each rail. The grade then changes to 0.75 per cent for a distance of 174 ft., and in this section there is a track scale serving each track, both of 300 tons' capacity.

Beyond the track scales there is another separation grade, of 3.77 per cent, for 130 ft. On this grade each track has a two-section retarder, 72 ft. long, with 11 cylinders on each rail. The hump tracks then flatten out on a grade of 1.4 per cent and on this grade in each track there is a retarder 103.25 ft. long with 16 cylinders on each rail. The 1.4 per cent grade carries through the three turnouts by means of which the hump lead is divided into four secondary leads. These leads are on grades of 0.9 or 1.1 per cent, and each of them has a two-section retarder 72 ft. long. Beyond these retarder locations, each secondary lead divides immediately into the individual classification tracks, and in this area, and extending somewhat into the classification yard through curves ranging from 2 deg. to 14 deg., the average grades of the track groups range from 0.22 per cent to 0.325 per cent. Beyond these curves the non-accelerating grade is 0.2 per cent, which changes to slow-down grades of varying percentages in the easterly portion of the yard;

hand-operated skates are used for stopping cars at the easterly end of the classification yard.

Proceeding from the north to the south side of the classification yard there are 2 tracks for bad-order cars; 5 tracks for classifying cars destined for local delivery; 4 long classification tracks; 30 classification tracks; 4 more long classification tracks; and one track for receiving cars destined for the local freight station—making a total of 46 tracks. At the easterly end of the yard, the two groups of four long classification tracks converge to form an eight-track forwarding yard in which the capacities of the individual tracks range from 125 to 142 cars, including the engines, the total capacity of this yard being 1,050 cars. By means of a series of ladders, the 30 shorter classification tracks, which lie between the two groups of long tracks, converge at the easterly end into two leads which extend into the forwarding yard.

All switches at the hump end of the classification yard have No. 8 turnouts and are operated by electro-pneumatic machines. The switch machines, together with the retarders, are operated from three control towers, one of which is located part way down the hump, while one of the other two is located directly opposite the retarder locations in each group of secondary leads. Other new structures in the vicinity of the hump include a two-story office building for the hump yardmaster, which is located directly opposite the track scales, a scale house, a small shelter for the hump conductor at the apex of the hump, and a building that houses a repair shop for the car retarders. The small shelter is frame, while all the other buildings are of brick, concrete, and steel construction.

Two-Way Hump-to-Engineman Voice System

The communication and signaling facilities that have been provided at the hump and its vicinity are exceptionally complete and modern. Among these is a system that permits two-way voice communication between the hump conductor and the enginemen of locomotives engaged in humping cars. In this system, high-frequency carrier current is used as the medium of communication. Equipment for this system at the hump cabin includes a loud-speaker, a microphone, a foot-control switch, and a cabinet containing a transmitter, a receiver and power-supply apparatus. Each locomotive that is equipped for this type of communication contains, in the car, a control panel, a loud-speaker, and a hand microphone, the latter, when not in use, being hung on a hook within convenient reach of the engineman. Other essential parts of the equipment, which are mounted at different locations on the locomotive, are an equipment box containing the transmitter, and the receiver, a dynamotor to provide proper voltage for the tube circuits, a receiving coil and an output transformer. Three locomotives have been fitted with this equipment, two for use on each trick and one to be held in reserve.

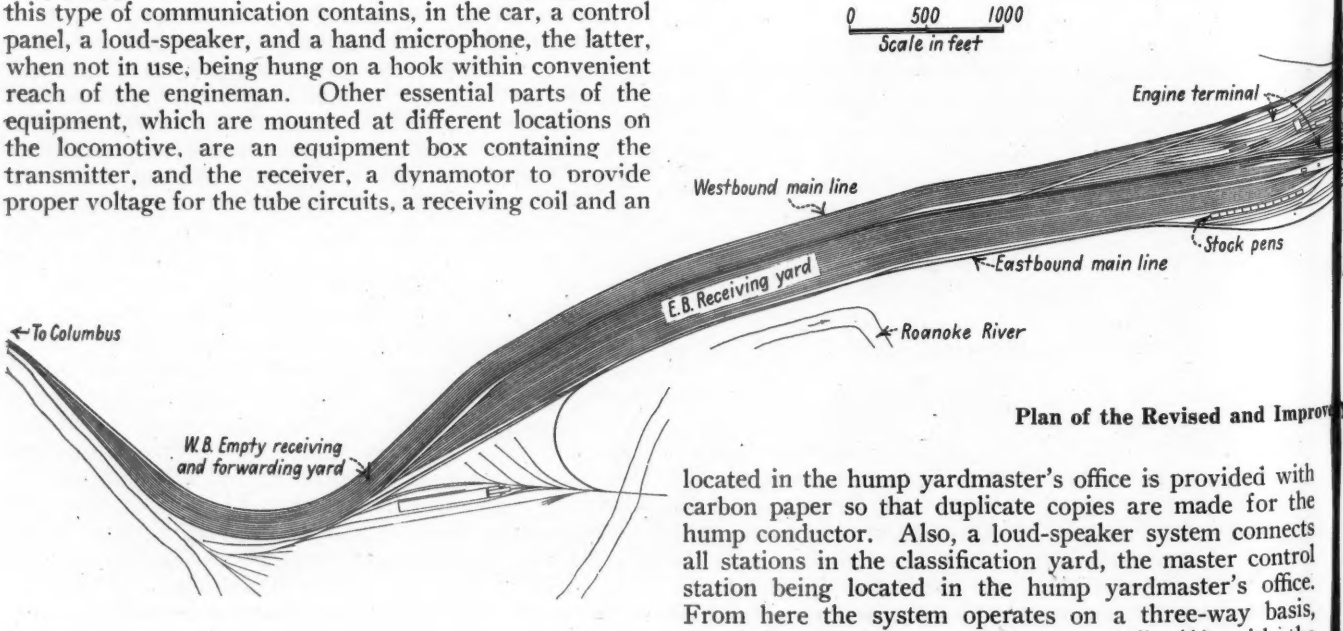
The circuit for this communication system includes a line wire reaching from the hump to the far end of the receiving yard, which is mounted on a pole line extending down the middle of the yard. At the opposite end of the yard, the line wire is grounded to each of the tracks carrying the circuit, and between this point and the hump one rail in each of these tracks is bonded. At the hump end of the circuit, connections are made with the tracks through the secondary of an output transformer.

When the hump conductor speaks into his microphone, voice currents are produced which are amplified and mixed with the carrier current. After being filtered and separated, the carrier current is amplified and transmitted, by means of the output transformer, into the track rails. Picked up by the receiver coil on the locomotive, the current is amplified and demodulated to separate the voice frequency currents from the carrier current. The voice currents are then further amplified and fed directly into the loud-speaker.

Hump Signaling System

The voice communication system described above is supplemented by a five-indication color-light signal at the hump for each hump track. In these signals a red indication means to stop, yellow to "hump slow," green over yellow to "hump medium," green to "hump fast," and flashing yellow to back up. These indications are duplicated by hump-repeater signals spaced at regular intervals throughout the length of the receiving yard. For the guidance of engines engaging in switching operations at the westerly end of the classification yard, a color-light trimmer signal is provided for each of the main hump leads, these signals being arranged on a common mast located between the leads.

An unusually complete communication system is provided in the classification yard. Teletype machines are provided for transmitting the switching lists from the hump yardmaster's office to the three control towers and the general yardmaster's office. The teletype machine



Plan of the Revised and Improved Yard

located in the hump yardmaster's office is provided with carbon paper so that duplicate copies are made for the hump conductor. Also, a loud-speaker system connects all stations in the classification yard, the master control station being located in the hump yardmaster's office. From here the system operates on a three-way basis, permitting the hump yardmaster to talk (1) with the

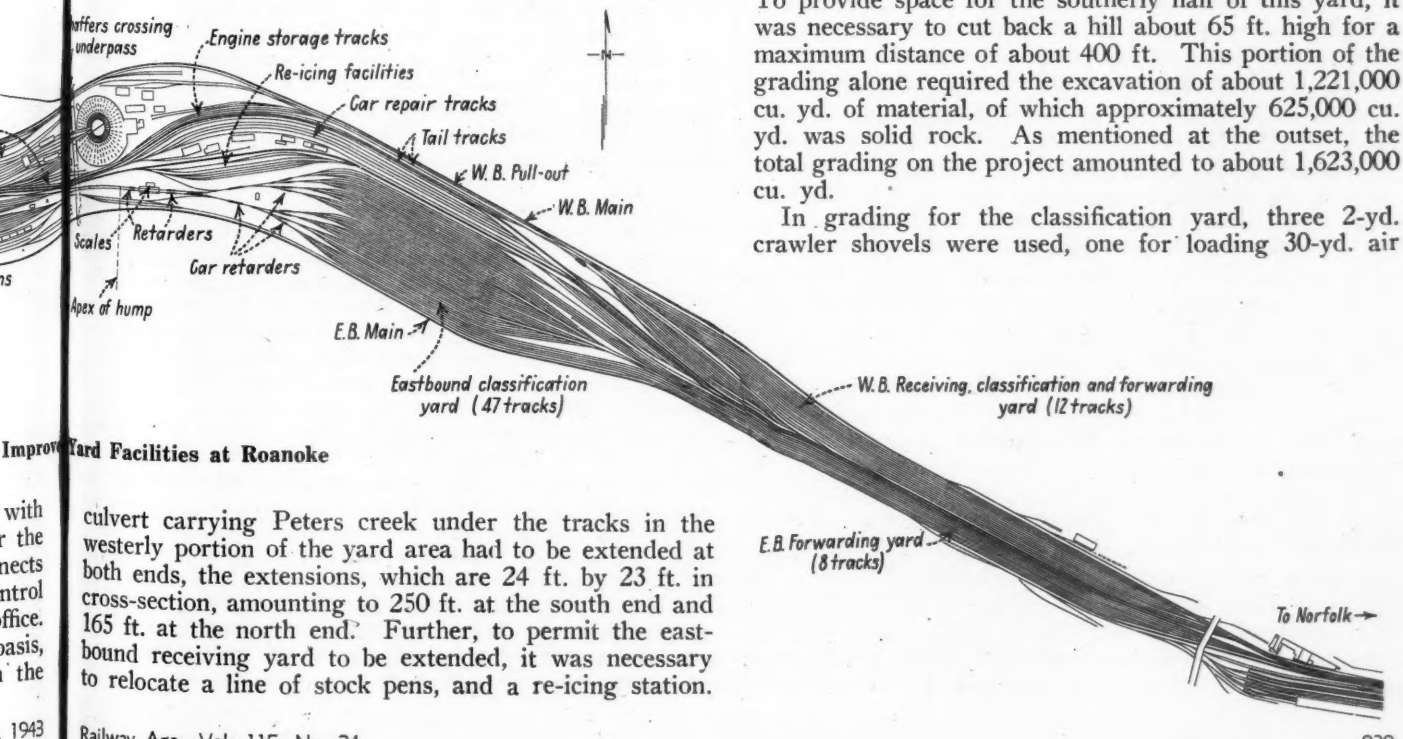
control tower and hump conductor, (2) with the switch tender at the west end of the receiving yard, and (3) with the general yard office, located at Twelfth street, and through outdoor speakers placed at strategic points in the classification yard. Likewise, the hump conductor can converse (1) with the switch tender in the receiving yard, (2) with the hump yardmaster's office and the control towers, and (3) with the general yard office and through the loud speakers in the classification yard. Microphones are placed near the lead to each group of tracks in the classification yard, whereby car inspectors, brakemen, etc., can immediately answer any call on the field speakers. This communication system is, of course, separate and distinct from the two-way voice communication system that operates between the hump conductor and the cabs of hump engines.

Other Yards Enlarged

In the enlargement of the eastbound receiving yards, the number of tracks was increased from 17 to 20, and the yard was lengthened at the west end sufficiently to permit the tracks to accommodate trains of 110 to 130 cars, including the engines. This yard now has a total capacity of 2,430 forty-five-foot cars. Paralleling the eastbound receiving yard on its north side is the westbound empty-car yard, the 10 tracks of which were lengthened, also at the west end, an amount sufficient to permit them to accommodate trains of 155 to 160 cars. The total capacity of this yard is now 1,565 cars.

As a result of the yard changes described above, it was necessary to shift the eastbound main line to the south varying amounts for nearly the entire length of the area affected by the improvement work, the extent of this shift being greatest (about 400 ft.) in the vicinity of the new eastbound classification yard. In addition, numerous other track changes were required to adapt the layout to the new conditions imposed by the enlargement and rearrangement of the different units of the yard.

The improvement work also entailed the relocation, revision or alteration of various existing facilities or structures, Among these, a reinforced concrete arch



Yard Facilities at Roanoke

culvert carrying Peters creek under the tracks in the westerly portion of the yard area had to be extended at both ends, the extensions, which are 24 ft. by 23 ft. in cross-section, amounting to 250 ft. at the south end and 165 ft. at the north end. Further, to permit the eastbound receiving yard to be extended, it was necessary to relocate a line of stock pens, and a re-icing station.

At the easterly end of the project, the improvement work entailed a revision of the drainage system which involved the construction of a 4-ft. by 5-ft. reinforced concrete box about 940 ft. long. Other drainage work included the installation of an 18-in. reinforced concrete pipe across the classification yard, with catch basins at frequent intervals.

Another aspect of the work consisted of the construction of a reinforced concrete rigid-frame span 30 ft. long to carry the relocated eastbound main line across Riverside boulevard. This is at the southerly end of Shaffer's crossing where two tracks were formerly carried across the boulevard on a girder span in such a manner as to introduce an angle in the alinement of the roadway. In the improvement work, these two tracks were removed and, in providing the bridge for the eastbound main track, the alinement of the roadway was straightened. Another reinforced concrete bridge structure that was built is a private underpass under the westbound main and several other tracks, which was provided to give employees access to the engine-terminal area without crossing these tracks at grade.

Aside from these structures and those mentioned in connection with the classification yard, a number of new buildings were provided, most of which are in the vicinity of the engine terminal. These include a 35-ft. extension to 16 stalls of the roundhouse; a blacksmith shop; two engine-inspection buildings, including pits; a wash and locker building for shop and enginehouse employees; a wash and locker building for the crews of road engines; a garage and storage building, as well as another separate store building; an engine washing platform for two tracks, 46 ft. wide by 136 ft, long; two car inspection buildings; five ice and supply houses; four ash hoists and one rubbish hoist. A concrete roadway, 8 ft. wide and 2,200 ft. long, was built from a point near the enginehouse to the car repair yard, which is some distance to the east.

Grading Was Extensive

To bring about the improvements described in this article, a large amount of grading was required, especially in the vicinity of the new eastbound classification yard. To provide space for the southerly half of this yard, it was necessary to cut back a hill about 65 ft. high for a maximum distance of about 400 ft. This portion of the grading alone required the excavation of about 1,221,000 cu. yd. of material, of which approximately 625,000 cu. yd. was solid rock. As mentioned at the outset, the total grading on the project amounted to about 1,623,000 cu. yd.

In grading for the classification yard, three 2-yd. crawler shovels were used, one for loading 30-yd. air

Much Excavated Material Was Handled in Dump Cars

dump cars and the other for loading 16-yd. tractor-drawn Euclid wagons, of which about 14 were used. That portion of the excavated material that was loaded into dump cars was used for embankment rebuilding work on the various lines in the vicinity of Roanoke, the maximum haul for this purpose being about 25 miles. About 450,000 cu. yd. of the material from the cut was disposed of in this manner, the remainder being either wasted or placed in embankments at other locations on the project.

When the grading at the site of the classification yard had been completed, the group of tracks comprising the southerly half of this yard were laid, and during this work the old yard was continued in service. When the southerly portion of the new yard and the hump layout had been completed, this section of the yard was placed in service and operations in the old yard were discontinued. It was then possible to carry out such changes in grades and alinement in the body of the old yard as were necessary to incorporate it, with the addition of a number of new tracks, as the northerly section of the new yard. These changes included the raising of the grade of the yard a maximum of 4½ ft. at the easterly end and the lowering of the grade at the westerly end a corresponding amount.

Another undertaking of considerable magnitude that was necessary in carrying out the improvement work was a channel change in the Roanoke river. This stream is located on the south side of the company's property, and in its original alinement it contained a loop that encroached on the alinement of several tracks as well as a roadway that the company desired to construct to give access to its roadway material yard. For this reason a new channel was cut across the tip of the loop, setting it back a maximum distance of about 150 ft. The grading required in making this change, which entailed the movement of about 47,000 cu. yd. of material, was carried out largely by two 16-yd. LeTourneau carryalls, supplemented by a number of bulldozers for spreading the material.

Considerable grading was also required at the westerly extremity of the project in connection with the extension of the eastbound receiving yard and the empty-car yard, which included the excavation of a cut at the extreme westerly end of the empty-car yard. Much of this material was handled by air-dump cars, although the two carryalls and a number of dump trucks were also used here. The equipment used in this phase of the work included an additional crawler shovel of ¾-yd. capacity. With part of this highly-mechanized grading organization working two 10-hr. shifts daily, as much as 14,700 cu. yd. of material was handled in a single day on the entire project.

The yard improvements described in this article were undertaken in October, 1940, and completed in December, 1942. The work was done under the general direction of W. P. Wiltsee, chief engineer, and A. B. Stone, assistant chief engineer, and under the direct supervision, during its initial stages, of the late O. V. Parsons, assistant engineer, who wa succeeded by W. H. Bettis. J. P. Maloney, resident engineer, was in direct charge of the field work. The design and installation of the signals and communication were under direct supervision of J. A. Beoddy, superintendent telegraph and signals. The car retarders, the power switch mechanisms, their control apparatus, the engine communication system and the signal systems, were furnished by the Union Switch & Signal Co., Swissvale, Pa., and installed by that company. Railroad forces performed all the track work and also installed the communication system. Except for certain minor items, the grading work was performed by the Ralph E. Mills Construction Company, Frankfort, Ky. Contractors M. S. Hudgins, B. F. Parrott & Co., J. P. Pettyjohn Co., and Martin Bros., had contracts covering other phases of the work.

New Book . . .

Proceedings of the American Railway Bridge and Building Association for 1942. 274 pages. 6 in. by 9 in. Bound in cloth. Published by the Association, Elinor V. Heffern, Secretary, 310 South Michigan Avenue, Chicago. Price $2.00.

Reporting the intensive forty-ninth annual meeting of the association, a meeting held under war-time conditions with its serious shortages of men and materials, this annual volume of the association reflects throughout the concern of bridge and building men for the adequate war-time maintenance of the structures in their charge. Indications of this concern are reflected in practically all of the reports included in the volume, most of which include material which is more pertinent today than at the time the reports were prepared and presented. These reports cover the prevention of accidents among bridge and building employees; conservation of bridge, building and water service materials; meeting the demand for increased water supplies in fast-freight service; rail fastenings on bridges, cinder pits and turntables; the repair of steel bridges; piles and pile driving; the cleaning of masonry buildings; and wearing surfaces for building floors, platforms and roadways.

To a still greater extent, the papers and addresses presented in the volume reflect the impact of war conditions and the anxiety that has been felt over the situation by the officers responsible for bridges and buildings. These included such subjects as The Outlook for Labor in Bridge, Building and Water Service, by Edwin M. Fitch, assistant director, Division of Transport Personnel, Office of Defense Transportation; Blackout and Protective Lighting, by W. G. Darley, General Electric Company; The Protection of Railway Structures in Time of War, by B. R. Kulp, chief engineer, Chicago & North Western; The Material Situation, as Seen by WPB, by David P. Beach, assistant chief, Maintenance Equipment section, Transportation branch, WPB; The Material Situation, as Seen by a Bridge Man, by J. B. Hunley, engineer of structures, New York Central System, west of Buffalo; The Material Situation, as Seen by a Water Service Man, by G. E. Martin, superintendent water service, Illinois Central; Possibilities of Reclamation and Salvage, by R. P. Hart, bridge engineer, Missouri Pacific; and Reducing Demands for Cars and Locomotives in Company Service, by W. D. Beck, district manager, Car Service Division, A. A. R.

Railroads-in-War News

RRs "Did a Job" in 1943, Says Gormley

"Better railroads and better railroading" made such results possible

In 1943 American railroads "did a job the like of which has never been seen before either in this country or in any other country in the world," M. J. Gormley, executive assistant of the Association of American Railroads, told the Southeast Shippers Advisory Board meeting at Birmingham, Ala., on December 9. The accomplishment was the result, he declared, of "a combination of better railroads and better railroading," while he also paid tribute to the effectiveness of rail-shipper cooperation.

Traffic Prospects for '44. — Freight traffic in 1944 will increase between two and five per cent over this year, and railroad passenger business will go up between 10 and 20 per cent, Mr. Gormley predicted, and he went on to explain that the railroads next year will be called upon to handle about 125 per cent more freight traffic than they did in 1939, the year war broke out in Europe, and approximately 85 per cent more than in 1918, the peak year of the First World War. They will also be required to handle 327 per cent more passenger traffic than they did in 1939 and 127 per cent more than in 1918, he added.

"I believe that the railroads will be able to do the job in 1944 as well as they have done it since the beginning of the war," the speaker remarked. "But to do it will require the superhuman effort of all concerned with transportation, and that means not only the railroads, but also the shippers and receivers of freight, those who travel and the government."

To handle the 1944 load, Mr. Gormley maintained, the railroads will need more equipment. He explained that they have asked the proper government authorities to permit them to obtain between 40,000 and 50,000 new freight cars and about 1,200 new locomotives by next October.

The speaker described the manpower problem on the railroads as "serious," and said they are doing everything possible to meet this situation. He urged shippers and receivers of freight to assist in getting even more efficiency out of the plant by further improving car utilization.

Freight Traffic Up 13.6 Per Cent. — On the freight side, Mr. Gormley reported, the railroads in 1943 will have turned in an estimated 725 billion ton-miles of transportation service—an increase of 13.6 per cent over 1942 and 117.4 per cent over 1939. Even more significant, he told the shippers, the railroads this year will have hauled 62.1 per cent more freight than they did in 1929, when freight traffic set a record, and 78.8 per cent more than in 1918.

On the passenger side, he continued, the railroads in 1943 will have performed 85 billion passenger-miles—or 58.4 per cent more than in 1942 and 275.3 per cent more than in 1939. Railroad passenger business this year will exceed that of 1920, the previous record year, by 81.4 per cent, and will be 99.2 per cent more than in 1918, he said.

Declaring that it is impossible to determine exactly how much of this transportation service had a direct bearing on the war effort, Mr. Gormley went on:

"Consider what the railroads will have done this year for the Army alone. During 1943, our railroads will have carried more than 10 million troops in special trains and special cars. This is over 1,200,000 more than they handled in similar movements during the entire 19 months that America was in the First World War. In addition to the organized movements, the railroads this year have transported millions of other men traveling under orders in smaller groups. And none of this, it should be noted, includes the personnel of

(*Continued on page 944*)

Have You an Invention to Help Win the War?

The Smaller War Plants Corporation is appealing to all Americans who have ideas or inventions which may help win the war, to make their ideas available to the government. To assure that each suggestion be afforded an opportunity for a hearing, the Corporation has established definite procedure for looking into the merits of all such new ideas which are submitted to it.

Any reader of *Railway Age* who has an invention or idea that he believes will help hasten victory, is urged to communicate immediately with the Smaller War Plants Corporation, Technical Development Section, 226 West Jackson blvd., Chicago, 6.

This section has already handled hundreds of new developments and devices and many are now in effective use by the service of the armed forces. Many others are at work on the home front.

One simple invention might shorten the war by months. Another might save thousands of lives. Your idea may be the very one that is needed.

Non-Ops' Wage Case Gets Before Senate

Truman-Crosser Resolution was scheduled to come up on December 9

Senate consideration of the Truman-Crosser resolution to give Congressional approval to a straight eight-cents-per-hour increase for non-operating railroad employees was scheduled for Thursday of this week, an agreement in that connection having been reached on Tuesday by Senator Truman, Democrat of Missouri, and Majority Leader Barkley, Democrat of Kentucky.

The measure, Senate Joint Resolution 91, was thus due to be taken up two days after the public heard War Mobilization Director Byrnes' latest address warning against inflation. Justice Byrnes referred specifically to the railway wage controversies, and in general to attempts of special groups to exert pressure on Congress.

Lay That Pistol Down, Boys. — "No group," he said in the latter connection, "has a right to hold a political pistol at the head of the Congress or of any administrative agency and say that they will strike. Any group which threatens to strike in wartime unless the executive or the legislative branch of the government meets its demands is using a political pistol. The government must say to any such group, 'Lay that pistol down.'"

Of the railway wage controversies, the O. W. M. director had this to say: "The operating railroad workers feel aggrieved. A panel awarded to them an increase of 4 cents an hour—on the ground that it was all they were entitled to under the Little Steel formula. This award was approved by the Stabilization Director. They say others have fared better than they did. It is always easier to point to those who have fared better than we have. It is not so easy to dwell on the plight of those who have not fared so well. They threaten to strike unless the executive branch of the government approves a greater increase for them than has been awarded.

"The non-operating railroad employees also feel aggrieved. . . . The non-operating employees are now appealing to the Congress under the threat of strike in wartime to give them an 8-cent increase instead of the 10-to-4-cents increase awarded to them."

As noted in the *Railway Age* of December 4, page 908, S. J. Resolution 91 was approved by the Senate committee on interstate commerce on November 30, without a dissenting vote. The committee's favor-

able report was filed in the Senate on December 3, the same day on which Senator Truman proposed a strengthening amendment. The amendment would add to the resolution language specifically annulling Economic Stabilization Director Vinson's orders disapproving the eight-cent increase. There would remain also the language declaring the August 7, 1943, labor-management agreement a pact in accord with the Railway Labor Act, all other requirements of law to the contrary notwithstanding.

Why Sliding Scale Is Bad. — The committee's report reviews briefly the history of the controversy, and upholds the non-ops in their opposition to sliding-scale increases. "Many cogent reasons," it said, support their position that a sliding-scale adjustment "would be disruptive of the wage structure which has been in the process of development for a long time in this industry." Noting how the processes of the Railway Labor Act were followed in the case, the committee asserted that "Congress should now insist that its laws be observed."

It has become incumbent on Congress, it added, "to interpret its own act in this stalemate."

Later on attention is called to the fact that there would be little difference in the total amount of money as between the two plans. Whereupon the report asks; "If 8 cents does violence to the Little Steel formula, what does 4 to 10 cents do to it? . . . Obviously the railroad industry wage agreement is not inflationary since Judge Vinson maintains that his substitute is not inflationary."

Finally, the report pays tribute to the wartime performance of railroad managements and employees, contrasting it with "the indescribable confusion brought about by government operation in World War I." Thus, as the committee sees it, "no unsettled dispute with reference to the wage increases here involved should be allowed longer to plague the railroad industry." And, in its opinion, Congressional approval of the resolution "will not weaken, but will fortify, the hold-the-line policy of the President."

Op Strike Vote Dec. 15. — Congressional approval would not, of course, make the resolution effective; for a joint resolution, like a bill, must go to the President, where it could be vetoed. Meanwhile, leaders of the train service brotherhoods held a conference in Washington last week with Dr. William M. Leiserson, chairman of the National Mediation Board. They have set December 15 as the date for a Cleveland, Ohio, meeting to announce results of the strike ballot being taken among the ops.

The Treasury's War Finance Division is on the job in an effort to get any back pay awarded to the non-ops into war bonds. A November 30 notice sent to chairmen of railroad joint war bond committees said it appeared likely that an adjustment "will soon be agreed to," and went on to urge prompt steps to contact the employees on the matter of purchasing bonds. The notice recalled that the original emergency board report recommended that the back pay be awarded in bonds, but that it would be paid in cash under the labor-management agreement of August 7.

Informed Opinion Refutes Wallace's Slanders

Drawing attention to the ingratitude of the Vice-President of the United States for his recent baseless attacks on the railroads—in recompense for their magnificent accomplishments in the movement of war traffic—H. L. Baldwin, publicity manager of the Boston & Maine, has drawn attention to the fact that government officials who are most closely informed regarding railroad behavior render a far different report of it than does the left-wing, pietistic New Dealer.

Addressing the Millinocket (Me.) Chamber of Commerce on December 7, the Boston & Maine's publicist cited recent commendations of the railroads by the Army (signed by Undersecretary of War Patterson) and the Navy (signed by Undersecretary of the Navy Forrestal)—adding that these are "but two of hundreds of similar compliments which have come to the railroads all over the country from shippers, farmers, manufacturers, travelers and men and women in the armed services."

"Attempting to belittle this effort and accomplishment," Mr. Baldwin went on to say, "by digging up skeletons from the graveyard of the past in an effort to confuse the shipping and the traveling public so that, by some hook or crook, the railroads may again be handed over to the governmental bureaucrats to play with, can hardly succeed this time."

Used Earth-Moving Equipment Needed in Britain

Because of the critical coal shortage facing the United Nations, WPB's Construction Machinery division has issued an urgent plea for used earth-moving heavy equipment to be shipped abroad for new large-scale coal stripping operations in the British Isles. Since 90 per cent of America's construction equipment now being built goes direct to the armed forces, the appeal was directed to general and highway contractors, used machinery dealers, state highway departments and municipal and county road commissions throughout the country.

Used equipment may be offered for sale to the Procurement division of the Treasury department, which is acting as purchasing agent for the Office of Lend-Lease Administration. The machines urgently needed are 250 Diesel or steam-powered shovels and draglines of one and one-half cu. yds. capacity or more, and 100 Diesel-powered tractors with scrapers and bulldozers.

Coal mining experts have estimated that the shipment of this machinery, which would occupy some 20,000 tons of cargo space, would save 15,000,000 tons of coal shipping space this year and at the same time help ease a major drain on the tight coal situation in this country.

Search for the used machinery is now being conducted by specialists in the field, employed by the Construction Machinery division. Inspection and final negotiation of sale are the joint responsibility of representatives of that division and agents of the Treasury Department.

It is emphasized by officials of both of the government agencies involved that the type and quantity of machinery will not affect domestic contractors engaged in coal stripping operations, but that voluntary co-operation on the part of the owners of such machinery will relieve the domestic market of the necessity of supplying a huge tonnage of coal for export.

Lake-Rail Coal Movement Under the 1942 Total

With the Great Lakes shipping season nearing its close, the Office of Defense Transportation on December 7 reported that 44,637,555 tons of bituminous coal had been handled through the Lake Erie docks by the railroads and lake steamers from the opening of the season up to November 28. This was a reduction of 2,277,730 tons from the total for the equivalent 1942 period.

The failure to equal last year's figure was the result of several factors, the O. D. T. pointed out, including the late opening of navigation this year, the several "stoppages" of coal production, and the operation of General Order ODT 9A, which was intended to expedite the movement of iron ore on the lakes at the expense of the traffic in coal and other commodities.

As uncertain weather and high insurance rates discourage lake movements after December 5, the traditional date for closing navigation, coal shipments from lower lake ports will be negligible from now on, it was explained, and cars that have been engaged in the movement between the mines and these ports will be released for other service. As coal production is expected to increase, while the turn-around time of cars in other movements at the same time will tend to increase from the effects of freezing weather, the addition of these cars to the total available for service in other parts of the country will not mean that the car supply will be materially easier, the O. D. T. emphasized.

Manpower Liaison Staff Set Up in Field by O. D. T.

Field representatives of the Division of Transport Personnel of the Office of Defense Transportation have been assigned to War Manpower Commission offices in that agency's 12 administrative regions "to insure that essential domestic transportation service is not curtailed through lack of an adequate supply of transportation personnel," Director Eastman of the O. D. T. announced December 7.

These O. D. T. representatives will not recruit any employees or duplicate any function now performed by the W. M. C., Mr. Eastman explained. They will, however, "advise and assist" W. M. C. officers on manpower problems in the transportation field, while at the same time they will keep the O. D. T. informed on critical manpower situations in their respective regions and consult with O. D. T. regional officers on such problems, which, he pointed

out, are becoming increasingly difficult in the transportation industry.

Their duties also will include promotion of self-help measures within the industry and cooperation with carriers in obtaining assistance from the W. M. C. in meeting personnel problems.

Locations of the Labor Offices.—The O. T. D. assignments are as follows: Region 1, headquarters in Boston, Mass., Leslie S. Bell, recently in the O. D. T. Division of Traffic Movement; Regions 2 and 3, headquarters New York and Philadelphia, Pa., respectively, Benjamin R. Miller, recently assistant director of mass transportation for the war transportation committee of the New York State War Council; Region 4, headquarters Washington, D. C., Gerald R. Gallagher, recently a member of the government's African Railroad Mission; Region 5, headquarters Cleveland, Ohio, Clarence M. Ballou, recently president of the Steel Products Warehouse Association; Region 6, headquarters Chicago, Thomas C. McKeen, formerly with Army Service Forces; Region 7, headquarters Atlanta, Ga., Norman C. Raabe, lately acting chief of the trailer section of the Automotive Division of the War Production Board; Region 8, headquarters Minneapolis, Minn., Hjalmer Petersen, former governor of Minnesota; Region 9, headquarters Kansas City, Mo., Edgar M. Hymans, former district supervisor of the Bureau of Motor Carriers of the Interstate Commerce Commission; Region 10, headquarters Dallas, Tex., Harry B. Dynes, labor relations counselor; and Region 12, headquarters San Francisco, Calif., George B. Herrington, recently special assistant to the W. P. B.'s western log and lumber administrator. The representative for Region 11, headquarters Denver, Colo., was not named in the O. D. T. announcement.

A Bulletin on Training.—Publication of "Transportation Training," the first of a series of bulletins "intended primarily to acquaint transportation company officials with training programs and information which may be of help to them in meeting their manpower problems," was announced December 6 by the O. D. T. The booklet is available from the personnel training section of the O. D. T. Division of Transport Personnel, Washington, D. C.

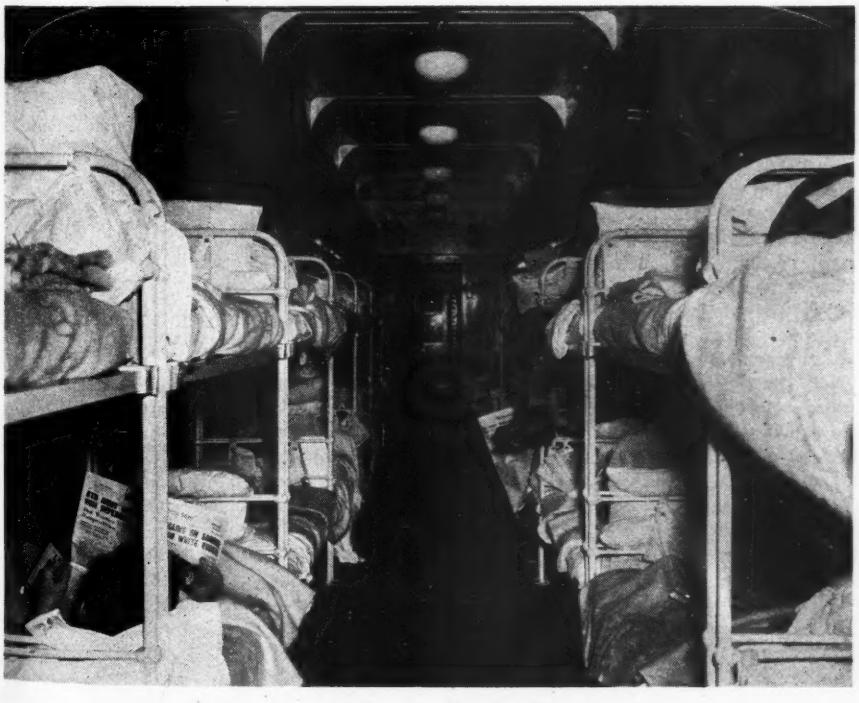
Among well organized employee training programs in operation in the transportation industry, the booklet discusses the "10-day school" for trainmen, enginemen and switchmen operated by the Illinois Central, the "unit instruction" course given women bus drivers by the Key System in California; training programs promoted by labor-management committees in the trucking industry; and upgrading or supplementary training of employees already in service, as developed by the Erie.

18-Car Army Hospital Train Carries Canadian Wounded

Men wounded in the Sicilian campaign and Canadian prisoners of war repatriated from Germany reached Montreal, November 26, aboard an 18-car special army hospital train, traveling over Canadian National lines from an Eastern port. The train, which was made up of 4 hospital cars, 11 sleeping cars, 2 C. N. R. diners and 1 baggage car, was manned by crews carefully chosen, and was operated under special orders to insure all possible comfort to the injured.

The engine crews gave particular heed to making all stops and starts smoothly and curves were taken at slow speed. Maximum speed for the entire trip was 45 m.p.h.

Certain of the dining car attendants and a sleeping car conductor had served in either World War I or II, and were assigned to this trip because of their experience with train patients.



Photograph Courtesy C. N. R.

General View of One of the Train's Four Hospital Cars

These wounded, who had been put aboard the special train from the hospital ship "Lady Nelson" (formerly flagship of the Canadian National Steamships), were welcomed at Montreal by relatives and friends.

Needs for Additional Workers Now 117,000

The needs for additional workers in the entire railroad industry are estimated by the Railroad Retirement Board to have been 117,000 on November 1 as compared with 116,000 on October 1. The estimate for the entire industry is based upon reports from 197 railroads which show a need for 103,408 additional workers on November 1. The increase of 1,000 during November, the Board states, continues the upward trend that has been observed every month this year, except July, but at a slower pace than in the last few months. The rise above the preceding month's total was 16 per cent on September 1 and 8 per cent on October 1, but only 1 per cent on November 1.

The changes in the total needs reported in the various employee groups were small except in the transportation group where there was an increase of 1,100, the report of the Board continues. In this group the increase in the shortages of freight handlers was 750 and that of switchmen was about 350. In addition, cold weather in the Lake Superior area developed need for 375 ore steamers. Needs in train and engine service, excluding switchmen, decreased by 250 and fewer porters and switchtenders were needed.

Shortage of Skilled Help.—Although changes in the totals for the other employee groups were numerically small, there were changes within the groups. In maintenance of equipment and stores there were decreased needs for laborers and coach cleaners but needs for skilled workers and helpers and apprentices were higher, particularly in the carman and machinist occupations. Fewer track laborers but more bridge and building carpenters and helpers were needed in the maintenance of way and structures group.

The needs, as of November 1, of employers reporting in both October and November are as follows:

Employee group	Number	Needs Reported Per cent of total	Per cent of Oct.
I Executive, official and professional	213	0.2	97.7
II Clerical	2,076	2.1	99.1
III Maintenance of equipment and stores	28,860	28.8	100.1
IV Maintenance of way and structures	52,175	52.0	99.8
V Transportation	16,369	16.3	107.1
VI Miscellaneous	604	0.6	96.3
Total	100,297	100.0	101.0

Territorial Variations.—The number of workers headed by employers who reported in both October and November increased in 4 of the 6 geographical areas. The largest increase was one of 1,000 in area B, which includes Idaho, Utah, Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Minnesota and Iowa. In this area the needs in the maintenance

of way and structures group increased by 600 and in the transportation group by 550, but decreased by a little over 100 in the maintenance of equipment and stores group. In areas C (New Mexico, Texas, Louisiana, Kansas, Oklahoma, Missouri and Arkansas) and D (West Virginia, Maryland, Virginia, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina and Florida) the increases were about 500 each and in area E (Wisconsin, Illinois, Michigan, Indiana, Ohio and Kentucky) about 300.

Somewhat smaller demands for maintenance of way and structures workers and transportation employees brought about a reduction of 800 in needs in area A, Washington, Oregon, California, Nevada, and Arizona. In this area, however, needs for maintenance of equipment and stores workers were 300 higher.

Nearly 500 more transportation workers were needed in area F, Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, and Pennsylvania, but decreases in needs for maintenance of way and structures were large enough that the total needs for the area were 500 less than on October 1. A factor tending to reduce needs on some railroads in area F has been the partial restoration of water-borne movement of petroleum and the completion of the "Big Inch" pipeline.

Absorption of Increased Pick Up and Delivery Costs

Railroads and other line-haul carriers were this week given the option by the Office of Price Administration to withdraw their agreements to absorb, without reservation, increased pick-up and delivery costs. O. P. A.'s action came in Amendment No. 61 to Revised Supplemental Regulation No. 14 to the General Maximum Price Regulation, effective December 13, 1943.

Its effect is to place line-haul carriers who made the absorption agreements prior to November 4, 1943, on the same basis as those who made them subsequently. The earlier agreements stipulated, without reservation, that the line-haul carriers would absorb increased costs in connection with applications for adjustment in rates filed by their pick-up and delivery agents. Later ones have reserved for the line-haul carriers the right to present for consideration by any regulatory body, the increased costs resulting from the advanced pick-up and delivery charges. All agreements may now be revised to include this reservation.

Cross-hauling of Vegetables and Fruits by Rail

Figures which "indicate the possibility of even greater efficiency and more economic use of our limited transportation facilities than has already been attained, if some of the present cross-haul movement were eliminated," are given in the latest issue of the Bureau of Agricultural Economics' "Marketing and Transportation Situation."

"It is estimated by reported unloads from states of origin that for only nine markets during 1942 there could have been a saving of more than 5,500 freight cars if cross-hauling had been eliminated," the survey said. "Over 3,000 carlots of potatoes were cross-hauled. Maine potatoes moving west to St. Louis or Chicago during months when Idaho potatoes were reported unloading at Boston, New York, and Philadelphia. An estimated 1,160 carlots of apples were cross-hauled, 454 carlots of cabbages, over 400 carlots of cauliflower, and nearly 200 carlots of carrots."

This situation was appraised as "especially important in relation to the restricted supply of refrigerator cars, which is called upon to face an ever increasing wartime demand for refrigerated rail transportation." It is pointed out, however, that the Office of Defense Transportation and the War Food Administration are working to curtail cross-hauling and otherwise conserve equipment.

A. A. R. Expects Plenty of Materials by End of '44

There will be plenty of materials for equipment by the end of 1944, according to John J. Pelley, president of the Association of American Railroads, at a press conference following the annual meeting of the Association at Chicago on December 2. He said that while the War Production Board had promised more material for cars and locomotives, new coaches could not be expected until late next year. By that time there will be plenty of material for all-steel freight cars as well, he stated.

Mr. Pelley said that the manpower problem is now especially serious in certain localities including the Pacific Coast states, where shortages are interfering with locomotive operation.

In commenting upon the 10 per cent increased freight car efficiency goal, he said that the goal was high and that a minimum of 3 or 4 per cent would probably be attained, with some railroads actually reaching 10 per cent.

Eastman's Christmas Message to Civilian Travelers

"Stay home"—this was the substance of an appeal addressed by Director Eastman of the Office of Defense Transportation to "every civilian" considering a trip by train or bus during the Christmas and New Year holiday period extending from December 17 through January 10, 1944. Pointing out that government agencies and private employers had been asked to refrain from granting leaves to employees during this period, where travel would be involved, and that the armed services will restrict holiday furloughs in an effort to avoid passenger movements beyond the capacity of the transportation system, Mr. Eastman emphasized the necessity of individual cooperation in reducing the load to be handled in this season by trains and buses.

Willingness to put up with crowded conditions is no excuse for disregarding this request, the O. D. T. director declared. Civilians not only should forego all pleasure trips by train or bus during the holiday period, he said, but they also should postpone even necessary business or other travel, "if at all possible without impairment of the war effort," until after January 10.

"I must add," Mr. Eastman went on to say, "that I do not see how any civilian can ignore [this appeal] in good conscience, when all travel facilities are so badly needed to accommodate our men and women in uniform and those who must travel on war business, holiday or no holiday. It is up to civilians considering holiday trips to stop and ponder these facts—and stay home."

RRs "Did a Job" in 1943, Says Gormley

(*Continued from page 941*)

the Navy or the Marine Corps or the thousands of prisoners of war. Neither does it include the millions of soldiers and sailors traveling on furlough or week-end passes.

"During 1943, the railroads have been doing an equally impressive freight job for the Army. They will have hauled nearly 83 million tons of Army freight and express—or about four and one-half times as much as they moved during the entire period of the last war."

One Car Does Two Cars' Work.—They handled the much heavier traffic in 1943 with an increase in freight car ownership of only seven-tenths of one per cent, and an increase in locomotive ownership of but 1.2 per cent, Mr. Gormley observed, while passenger car ownership remained about the same. "In other words," he said, "each unit of serviceable equipment has been made to do more work through greater utilization. For instance, one freight car today is turning out nearly as many ton-miles of transportation service as two cars did in 1929, and the same is true of freight locomotives."

"So far in this war," the speaker concluded, "the railroads have performed what has been described as 'miracles.' They have done what many people thought would be impossible for them to do. In fact, they have done more than even some railroad men believed they could do. I believe the railroads will go on doing an outstanding job, and I know they can count on the continued cooperation of the shippers. When the war is over, no page in the history of the present struggle will be more brilliant than that devoted to the railroads' record."

Frees More Tank Cars for Oil Movement to West Coast

In an effort to expedite the movement of petroleum and its products to both the East and West Coast, the Office of Defense Transportation on December 9 announced that tank cars currently engaged in the eastern oil movement have been "partially unfrozen" for use in the growing movement from the interior to the Pacific coast. Through General Assignment Order ODT 7, Revised-2, shippers are permitted to employ cars now assigned to the eastern movement for any "essential authorized" petroleum movement to the three states bordering the Pacific, but not for any shipments to any interior points, unless specially authorized by appropriate O. D. T. permit.

The modified order further provides that the Washington, D. C., office of the O. D. T.

must be notified within 24 hrs. of any shift of cars under its terms, and requires that cars so diverted must be returned to the eastern movement when they are no longer required for the purpose for which they were withdrawn.

More Refiners Get Federal Aid on Freight Charges

Secretary of Commerce Jones announced December 4 that, effective that day, the federal Defense Supplies Corporation will, until further notice, undertake to reimburse oil refineries in petroleum district No. 2 for the difference between railroad and pipeline charges on crude oil moved to them from West Texas by tank car. "This action is necessary to utilize available refining capacity in District 2 in order to produce the maximum amount of petroleum products," the statement pointed out. However, companies whose taxable income places them in the excess profits bracket will not be eligible for such reimbursement.

Soldiers Off Duty May Work on Railroads This Month

Employment of soldiers at railroad stations, freight houses, and terminals during the soldiers' normal off-duty hours or while on pass has been authorized for the period from December 1 to January 2, the War Department announced on December 6.

"This employment, voluntary on the part of the individual soldier," the announcement said, "was authorized to help relieve manpower shortages during the holiday season. Rate of pay for such services will be determined by the employer and the individual soldier. Employment of soldiers will be only in cases in which civilians are not available, and will not be allowed to interfere with the soldier's training. Although employment is authorized for normal off-duty periods, furloughs will not be granted for this purpose. The soldiers, as individuals, may be employed to perform any tasks that the railroad officials in charge may request, including the handling of express, freight, parcel post and other mail."

Eastman Calls for Support of Chambers of Commerce

Supplementing his letter to heads of large industries asking their cooperation in current efforts to increase the efficiency of freight car utilization, as reported in *Railway Age* of December 4, page 911, Director Eastman of the Office of Defense Transportation has written the presidents of 1,450 chambers of commerce throughout the country soliciting their aid in obtaining the active support of industry executives to this end.

In his letter Mr. Eastman said that transportation as a whole would be confronted with critical conditions during the coming winter and spring. He cited tightening car supply, growing manpower shortages, winter operating conditions, and uncertainties facing truck transport as factors requiring intensification, by shippers and carriers, of conservation measures in railroad freight service.

Materials and Prices

The following is a digest of orders and notices of interest to railways, issued by the War Production Board and the Office of Price Administration since November 29:

Port Orford Cedar—Logs, lumber and veneer of Port Orford cedar were placed under complete allocation control November 30, by the WPB through issuance of Conservation Order M-359. The depletion of accessible stands and the use of this species for less essential products where other species may well be substituted, has resulted in serious shortages for war uses.

Saw Blades—Limitation Order L-326 and three accompanying schedules, effective November 23, provide a comprehensive standardization program for power-driven wood-cutting saw blades, which reduces the varieties of solid tooth circular saws and wide and narrow band saws from approximately 5400 to 1404.

Woodworking Machinery—Woodworking machinery as defined in Order L-311 and costing no more than $50 may be purchased through blanket MRO procedures, the War Production Board announced today. This action, taken by amending List B of PR No. 3, is designed to prevent an undue number of PD-1A preference rating assistance applications being filed for this type of equipment.

Bituminous Coal—The Director of Economic Stabilization on November 27 authorized the Price Administrator to grant increases in the prices of bitumnous coal requred by increased labor costs resulting from the wage agreement of November 3, negotiated by Secretary Ickes with the United Mine Workers. The price increases will average approximately 17 cents per ton on a weighted national average. Detail prices by districts will be promulgated by the OPA.

Crossties, Poles and Piles—Amendment No. 1 to Second Revised MPR No. 216 (Eastern Primary Forest Products), effective December 4, clarifies pricing of railroad ties by providing a new definition of "normal loading-out point." Previously a loading-out point was defined as the railroad siding or rafting grounds closest to the mill in the direction of shipment to destination. This meant that the loading-out point for a particular lot of ties might vary with the ultimate destination.

OPA now defines the "normal loading-out point" as the sales point to which primary forest products can be transported most cheaply from the point of production. This new definition, OPA said, is designed to end the practice of hauling ties beyond one loading-out point to a more distant loading-out point, where prices may be higher.

OPA, at the same time, announced the following changes in pricing provisions for Eastern primary forest products:

1.—Sellers of all primary forest products produced in Green and Taylor counties, Kentucky, may now use Zone 4 instead of Zone 5 ceiling prices. Railroad ties are the principal primary forest products produced in the two counties. The purpose of the change in zones is to provide the same ceilings along the rights-of-way of the Louisville & Nashville and the Southern, which previously ran through different zones. Maximum prices for ties produced in Zone 4, from culls to highest grade and longest length, range from 20 ct. each to $1.35 each, compared with 15 ct. to $1.20 in Zone 5. The main reason for the change, OPA said, was that ties which had formerly been sold at loading-out points along the L. & N. in Green and Taylor counties were being taken to loading-out points along the Southern, located in Zone 4, where the average price was 15 ct. per tie higher.

2.—Buying poles, piling and similar Eastern primary forest products for conversion to any use other than that for which OPA specifies is now strictly prohibited by the price agency. Evasion of ceilings through sales of piling for use as saw logs in the production of lumber has been reported. Ceilings for piling are higher than those for saw logs. The practice of buying piling for sawing into lumber is now illegal.

3.—Gemmell, Minnesota, at the request of the pole-producing industry, now is made a basing point for computation of transportation charges in delivered sales of Northern white cedar poles produced in Minnesota, Wisconsin and Michigan. For years Gemmell has been, in industry practice, a basing point city for the poles.

4.—Railroad cross ties and switch ties and other primary forest products produced in Canada and imported into this country at border points east of the eastern boundary of North Dakota may be sold at the maximum prices provided by OPA for Eastern primary forest products. Previously, sellers were required to submit proposed prices for the items to OPA for approval if they were produced in Canada and sold in the United States.

Douglas Fir—Amendment No. 4 to RMPR No. 26 (Douglas Fir and Other West Coast Lumber), effective December 6, is designed to facilitate production of the light construction types of lumber now in heavy demand as a result of changing requirements of the war program, by increasing maximum prices for Douglas fir dimension lumber and boards and reducing ceilings for heavy timbers, plank, and small timbers.

The price changes per M. b. m. are as follows: for dimension lumber, surfaced, an increase of $1.50; for boards in grades No. 2 and lower, an increase of 50 ct.; for timbers in grades under "Select Structural," a reduction of $1.50; and for plank and small timbers, in grades under "Select Structural" a reduction of $2.

Grain Doors—Amendment No. 19 to MPR 348, (Logs and Bolts), effective December 4, provides specific maximum prices for certain logs and bolts used to make grain doors, and produced in northeastern Texas, southeastern Arkansas, parts of Louisiana and all of Mississippi and Alabama.

They are contained in three tables added to the logs and bolts price regulation, each applying to specific types of wood produced in particular localities. The action is in accordance with a program for establishing definite regional prices for logs and bolts on the petition of buyers in log producing areas.

Gypsum Building Materials—Amendment No. 19 to Order No. A-1 Under Section 1499,159 b of MPR No. 188 (Manufacturers' Maximum Prices for Specified Building Materials and Consumers' Goods Other than Apparel), effective December 1, provides a six-month extension of the effective period of the price order establishing maximum prices for gypsum wallboard, lath and sheathing delivered to the West Coast from inland mills.

Machines and Parts—Amendment No. 106 issued November 26, comprises a collation of MPR No. 136 (Machines and Parts and Machinery Services), which gathers together all amendments since the issuance of the regulation. This regulation provides unified price control for practically all types of machines and parts. The collation, the first issued since June 30, 1942, provides one convenient reference to the price regulation affecting this diverse industry.

Stock Millwork—Amendment No. 3 to RMPR No. 293—Stock Millwork, effective December 4, provides that if a manufacturer of stock millwork, using a net list price in sales, adds the three per cent increase authorized in ceiling prices effective October 26, he must round off his ceiling to the nearest one cent.

Western Pine and Associated Species—Amendment 9 to MPR No. 94, (Western Pine and Associated Species of Lumber), effective December 4, provides that producers of larch-fir, inland red cedar, and incense cedar lumber in 12 western States may add $3 per M. b. m. to basic maximum prices of 12 specific grades of this material. The areas affected are Arizona, New Mexico, Colorado, Nevada, Utah, Wyoming, Idaho, Montana, South Dakota, California, and Washington and Oregon east of the crest of the Cascade Mountains.

At the same time, producers of western pine lumber were assured of the continuance of the $3 addition already granted on the same 12 grades on ponderosa, Idaho, sugar and lodgepole pine, white fir and spruce. The addition is no longer made conditional on the continuance of WPB limitation Order L-290. The addition of $3 is designed to compensate producers for higher production costs resulting from wage increases approved by the War Labor Board.

GENERAL NEWS

Bulwinkle Is Set Straight by Conn

Congressman had called transport assn. "cloak for railroad lobby"

Congressman Bulwinkle (D., N. C.), a member of the House Interstate Commerce Committee, recently wrote a piece for a magazine called "Sky Ways," in which he strongly supported a bill of his, H.R. 3421, which would prohibit common ownership between "surface" and air transportation. In the course of his article he attacked as "only a cloak for a railroad lobby" the Transportation Association of America, which is supporting common ownership of railway and other forms of transportation as desirable in the public interest.

Mr. Bulwinkle's article has been reprinted, and is being widely circulated by the lobby for air transport interests, who are seeking to retain their existing monopoly by persuading the public that the railroads are plotting to do what the air lines have already done.

Railroads Not in Control. — The Transportation Association, in an open letter from its executive vice-president, Donald Conn, to Mr. Bulwinkle, has drawn attention to the errors in the Congressman's propaganda writing, by citing the minority position of the railroads in the Transportation Association. Mr. Conn's letter also refutes the Bulwinkle assertion that "preserving competition between the forms of transport" is a "thirty-year old policy of Congress." Says Mr. Conn on this point:

"Congress has followed no such policy for the period of *thirty years*, except with respect to water transportation. Obviously what you refer to are the citations and opinions contained in your article quoted in support of your theory of prohibition of common ownership. In checking these, we find that they are all *over* thirty years old. At that time this country did not have the problem of competition between rail, highway and air services. As a matter of fact, the prohibitions contained in the Panama Canal Act relative to railroad ownership of water carriers were the only restrictions against common ownership of different forms of transport until the enactment of the Motor Carrier legislation of 1935. Common ownership was limited by this Act. The Air Transport legislation in 1938 as construed by the Civil Aeronautics Board practically prohibited any common ownership after that date. Reference is again made to our Monthly Letter No. 6, in which we traced the history of common ownership between forms of transportation from 1920 to 1938.

Common Ownership an Advantage.— "Wherever it was possible to co-ordinate transportation under centralized management during this period such services have proved to be in the public welfare, as well as in the interest of the investors.

"We contend, and we think we can prove, that the philosophy of compelling competition between *modes* of transportation, as emphasized in the Motor Carrier Act and the Civil Aeronautics Act, is contrary to the interest of the patron—shipper and consumer—and the investors in this industry. However, there apparently was a note of change in congressional thinking when the preamble to the Transportation Act of 1940 was adopted. But would any student of the problem contend that regulation had been dedicated 'to the end of developing, *co-ordinating*, and preserving a national transportation system by water, highway and rail, as well as by other means,' etc.? Your proposal in H.R. 3421 would abandon the possibility of ever accomplishing this aim of national policy.

Railroads Pioneered Air Transport. —"You may not know that the first transcontinental air line relied upon railroad financing, that various Greyhound bus companies, which we all recognize are rendering excellent public service, are owned in part by railroads. This conclusively rebuts your charge that common ownership would smother these newer forms of transport. . . .

"The primary aim of national policy is not touched upon in your article. Is Congress to base its attitude toward this industry from the standpoint of *promoting some form of transportation as against another*;—or, is it to adopt a philosophy of regulation which will assure the shipper and consumer of the most convenient, most efficient type of facility at the lowest possible cost consistent with a fair return to the private investor? Not a word in your statement is directed to this fundamental issue.

"Proposed legislation embodied in H.R. 3420 and H.R. 3421 establishes *transportation policy for the post-war* period without any consideration whatever of the over-all common-carrier transportation problem."

Aluminum Buses Approved

The War Production Board announced on December 4 that restrictions on the use of aluminum have been modified to permit its use hereafter in the manufacture of buses. This has been accomplished through amendment of Supplementary Order M-1-i. Through the use of aluminum in bus construction instead of heavier materials it is expected that additional passenger space may be provided, while gasoline consumption will be reduced and the load on tires will be eased, thus making the use of synthetic rubber for bus tires more feasible.

Trend of Earnings Continues Downward

I.C.C. Bureau comment shows how recent results are making themselves felt

How the reversal in recent months of the wartime upward trend in railroad earnings has encroached upon previous gains to produce an adverse effect on the cumulative figure is brought out in the latest issue of the "Monthly Comment on Transportation Statistics," published by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics.

As noted elsewhere in this issue, the Association of American Railroads' earnings report calls attention to the fact that October was the fifth consecutive month in which the net earnings of the carriers showed a decline as compared with the same 1942 months. Taking the A.A.R. estimate of $76,600,000 for October net income, the I. C. C. Bureau calculates that the net income after deduction of all taxes for the 12 months ended with October was about $966,526,000.

It goes on to point out that this is the first time since March that the net income for 12-month periods ending with successive months has been below a billion dollars. For the 12 months ended with September, it was $1,023,317,000, while the comparable figure for the 12 months ended with August was $1,044,399,000.

Rate of Increase Declines. — Gross revenues for the 12 months ended with October, however, reached $8,904,000,000, the highest total of the series, but here also attention is called to the fact that the October freight revenues were only 1.2 per cent above October, 1942, "a continuation of the steady decline in this series of percentages from the 35.9 per cent for February, 1943, over February, 1942." And to the fact that October passenger revenues, though 33.8 per cent above October, 1942, nevertheless represented "a continuous decline in corresponding percentages since the 105.5 per cent for March, 1943, over March, 1942."

October's gross was 6.8 per cent above October, 1942, but expenses were meanwhile up 23.3 per cent; so the month's operating ratio was 64.5 as compared with 55.9 in October, 1942. Included in October's expenses was an accrual of $38,970,000 for expected wage increases, of which $14,744,000 is applicable to the month and $24,226,000 to prior months. Only 82 out of 133 Class I roads made these wage accruals in October.

For the 10 months ended with October

(Continued on page 953)

$778,800,000 Net Income in 10 Mos.

Net railway operating income for same period was $1,188,410,005

Class I railroads in the first 10 months of this year had an estimated net income, after interest and rentals, of $778,800,000 as compared with $709,230,885 in the first 10 months of 1942, according to the Bureau of Railway Economics of the Association of American Railroads. The 10-months net railway operating income, before interest and rentals, was $1,188,410,005, compared with $1,161,080,771 in the corresponding 1942 period.

October's estimated net income was $76,600,000, compared with $135,538,275 in October, 1942; while the net railway operating income for that month was $113,083,851 compared with October, 1942's $184,779,795. October is the fifth consecutive month in which the net earnings of the carriers have shown a decline, the A.A.R. statement pointed out.

In the 12 months ended with October, the Class I roads had a rate of return of 5.59 per cent on their property investment, as compared with 4.92 per cent for the 12 months ended with October 31, 1942.

Operating revenues in the 10 months totaled $7,510,907,553 compared with $6,073,123,636 in the same period in 1942, an increase of 23.7 per cent. Operating expenses amounted to $4,556,089,793 compared with $3,763,167,750, an increase of 21.1 per cent.

Class I roads in the 10 months paid $1,606,604,616 in taxes compared with $1,000,203,529 in the same period in 1942. For October alone, the tax bill amounted to $154,061,886 an increase of $26,412,691 or 20.7 per cent above October, 1942. Twelve Class I roads failed to earn interest and rentals in the 10 months, of which five were in the Eastern district, two in the Southern region, and five in the Western district.

Class I roads in the Eastern district in the 10 months had an estimated net income of $320,500,000 compared with $298,059,164 in the same period last year. Their 10-months net railway operating income was $486,100,147 compared with $478,830,973.

Gross in the Eastern district in the 10 months totaled $3,318,760,100 an increase of 17.1 per cent compared with the same period in 1942, while operating expenses totaled $2,127,987,336, an increase of 17.4 per cent.

The Eastern district's estimated net income for October was $25,100,000 compared with $53,643,795 in October, 1942. The month's net railway operating income amounted to $41,063,819 compared with $73,147,029.

Class I roads in the Southern region in the 10 months had an estimated net income of $117,400,000 compared with $111,086,828 in the same period last year. Their 10-months net railway operating income was $171,877,982 compared with $166,045,751.

Operating revenues in the Southern region in the 10 months totaled $1,074,177,039, an increase of 26.6 per cent compared with the same period of 1942, while operating expenses totaled $611,661,097, an increase of 21.1 per cent.

In the Southern region for October the net income was $9,200,000 compared with $15,698,963 in October, 1942. Net railway operating income for the month amounted to $14,855,619 compared with $21,553,216.

Class I roads in the Western district had a 10-months estimated net income of $340,900,000 compared with $300,084,893 in the same period last year. Their 10-months net railway operating income amounted to $530,431,876 compared with $516,204,047.

The 10-month gross in the Western district totaled $3,117,970,414 an increase of 30.4 per cent compared with the same period in 1942, while operating expenses totaled $1,816,441,360 an increase of 25.7 per cent.

October's estimated net income in the Western District was $42,300,000 compared with $66,195,517 in October, 1942. Net railway operating income for the month amounted to $57,164,413 compared with $90,079,550.

CLASS I RAILROADS—UNITED STATES

	Month of October 1943	*1942*
Total operating revenues	$796,282,011	$745,584,148
Total operating expenses	513,570,515	416,430,354
Operating ratio—per cent	64.50	55.85
Taxes	154,061,886	127,649,195
Net railway operating income (Earnings before charges)	113,083,851	184,779,795
Net income, after charges (estimated)	76,600,000	135,538,275
Ten Months Ended October 31		
Total operating revenues	7,510,907,553	6,073,123,636
Total operating expenses	4,556,089,793	3,763,167,750
Operating ratio—per cent	60.66	61.96
Taxes	1,606,604,616	1,000,203,529
Net railway operating income (Earnings before charges)	1,188,410,005	1,161,080,771
Net income, after charges (estimated)	778,800,000	709,230,885

Drops Probe of Keeshin Activities at Chicago

The Interstate Commerce Commission, Division 5, has issued an order discontinuing the investigation which it launched in 1941 into certain freight-handling arrangements which Keeshin Truck-Rail Terminals, Inc., was alleged to have had with other Keeshin companies and a group of motor carriers operating out of Chicago. The order instituting the investigation was noted in the *Railway Age* of June 14, 1941, page 1093.

Expect More Joint Action Plans

Motor truck operators, particularly common and contract carriers, will be constrained by scarcities of trucks, tires, repair parts, gasoline and manpower to enter much more generally into joint action conservation agreements during 1944, the Office of Defense Transportation suggested in a December 9 statement *that* pointed out that such plans, already approved or pending, include about 1,000 operators and indicate an estimated annual reduction of some 20 million truck miles.

I. C. C. Frowns Upon Car Spotting Bill

Senator Brooks' measure would alter practices of time-proven worth

Because it would alter practices based on principles set forth by the Interstate Commerce Commission after full consideration, and subsequently upheld by the Supreme Court, passage of the bill (S. 1492) introduced in the Senate by Senator Brooks, Republican of Illinois, "to provide that the established railroad freight rates cover the receipt and delivery of loaded cars at the points of loading and unloading," is not recommended by the legislative committee of the commission, according to a letter from Commissioner Splawn, the committee chairman, to Chairman Wheeler of the Senate interstate commerce committee.

As noted in *Railway Age* of November 6, page 740, Representative Howell, also a Republican from Illinois, introduced in the House H. R. 3554, to the same effect, at the time the Brooks bill was introduced.

Splawn's Objections. — As expressed by Commissioner Splawn, the purpose of the proposed legislation is to "impose a legal obligation on the line-haul railroad to spot cars at any and all loading and unloading points on the property of large industries, performing service greatly in excess of that required in making simple placement on an ordinary siding or team track for other shippers in the same locality. This obligation would exist even though the railroad is prevented at its ordinary operating convenience from performing an uninterrupted service from or to actual points of loading or unloading because of some act or disability of the industry." It would open the way for allowances or the actual performance of extra service by a railroad for an industry contrary to the principle of equality of treatment "which is the outstanding objective of the Interstate Commerce Act," he said.

Under the practice now prevailing, the letter pointed out, "the transportation service which a railroad carrier is legally obligated to perform under a line-haul rate does not include the placement of the car at the point of loading or unloading in all instances and under all circumstances." It went on to explain how the line is drawn between spotting on team tracks and on warehouse spurs, on the one hand, and on the extensive private trackage of large industrial plants, on the other,

Carrier's Present Spotting Duty. — In its report in its terminal allowances investigation the commission established principles to control spotting service to the effect (1) that a carrier's duty in this respect does not extend beyond a point of interference or interruption resulting from the industry's action, (2) that delivery or receipt on industry interchange tracks constitutes delivery or receipt under line-haul rates, (3) that spotting service in excess of the equivalent of team-track spotting is in excess of that required of a carrier under its line-haul rate, and (4) that payment by

railroads of allowances to industries in lieu of the performance of such excess service is unlawful. The proposed legislation would result in a different interpretation of the carrier's duty, and does not meet with the approval of the commission's legislative committee, the letter explained, although Commissioner Mahaffie, a member, "does not agree with much" of the content of the letter, which represented the view of *the* committee majority, Commissioners Splawn and Rogers,

In addition to the objection based on the commission's adopted policy with respect to allowances, the bill under consideration was not approved by the committee because it would have the effect of "requiring a railroad to extend the application of its line-haul rates from and to all loading and unloading points within an industrial area in which its own stations are embraced, including points on the terminals of connecting lines," or, in other words, to absorb all switching charges, even though such charges might even exceed the revenue from the line-haul rate.

October Earnings in Canada

The two principal Canadian railways reported October earnings and expenses as follows:

Canadian National

October	1943	Increase
Gross	$37,585,000	$1,583,000
Expenses	28,346,000	1,247,000
Operating Net*	$9,239,000	$336,000
10 Months		
Gross	$364,534,000	$57,705,000
Expenses	283,177,000	48,012,000
Operating Net*	$81,357,000	$9,693,000

Canadian Pacific

October	1943	Increase
Gross	$26,344,166	$3,544,934
Expenses	20,502,749	3,421,699
Net*	$5,841,417	$123,235
10 Months		
Gross	$242,363,471	$32,437,623
Expenses	203,760,193	31,558,268
Net*	$38,603,278	$879,355

* Net, as shown in this tabulation, for the C. N. R., is equivalent to "Net Operating Revenue" in U. S. accounting terminology, while the net shown for the C. P. R. corresponds to "Net Railway Operating Income" in U. S. terms.

Moffat Route Re-Opened for Traffic December 1

At 12:01 a.m. on December 1, trains of the Denver & Rio Grande Western and the Denver & Salt Lake resumed service on the Moffat Tunnel route, which had been closed since a fire of unknown origin gutted the 1570-ft. single-track Tunnel No. 10 on September 20, causing cave-ins and completely blocking the line, as reported in the *Railway Age* of October 2.

More than 200 experienced tunnel workers have been employed day and night on three shifts to clear the tunnel. The workers included bridge and building men of both railroad and contractor forces released from the Big Thompson diversion project by the U.S. Bureau of Reclamation. Tunnelling equipment, such as special generators, mucking machines, etc., was secured from various construction firms, mines and municipalities in Colorado, Utah, Idaho and New Mexico.

While the tunnel was closed, traffic of both roads was diverted via Pueblo, Colo., the Royal Gorge route and Tennessee Pass. This added traffic, coming at a time when traffic was reaching its seasonal peak, threw a severe extra load on the Royal Gorge route, which was met by the employees voluntarily working "around the clock" in many instances until D. & S. L. employees could be dispatched to various points to aid the Rio Grande staff.

Porters Lose Case for Separate Union Representation

Promptly disposing of the case in a *per curiam* reversal of the lower court's judgment, that is, a finding unaccompanied by a formal decision, the Supreme Court of the United States on December 5 applied the precedent recently established by it in cases involving union jurisdictional disputes to that of the *Brotherhood of Railway & Steamship Clerks, Freight Handlers, Express & Station Employees* vs. *United Transport Service Employees of America,* in which certain station porters sought recognition as a separate class of employees entitled to separate union representation.

The effect of the finding is to support again the final authority of the National Mediation Board in deciding such jurisdictional disputes. The board had held that the porters were part of the station employees class and that the brotherhood was properly designated to represent them in negotiations concerning wages or working conditions. The porters had contended that they were entitled to separate representation, claiming among other grounds that they were not entitled to full membership in the brotherhood on account of race. The Supreme Court's views on the board's authority in jurisdictional disputes were reported in *Railway Age* of November 27, page 876.

Burlington Studies Postwar Transportation Needs

Convinced that there will be many radical changes in transportation after the war, L. R. Capron, vice-president of the Chicago, Burlington & Quincy, has instructed that railroad's traffic officers to make a special study of postwar transportation requirements in the territory served by this railroad.

"The war has brought about great changes in the quantity and type of rail transportation required by the nation as well as in the direction in which it moves," he said. "In some cases the normal flow of traffic has been reversed. New products and producing areas have been opened up. The Midwest has been the recipient of many new war industries, as well as branch plants of industries seeking to decentralize because of labor shortages, and other factors. All these have greatly affected rail traffic. At the same time most of our older established industries have been converted to the manufacture of war goods. With peace, some of these will return to the manufacture of the articles produced by them prior to the war. Others will manufacture entirely new articles. Some may discontinue operations, others expand, and many may further decentralize. Government-owned munition plants may be converted to peacetime production under private management.

"Great changes may also occur in agriculture. The production of hemp, and rubber and oil-producing crops, necessitated by discontinued imports, may be greatly reduced. Also, edible beans, potatoes and canning crops, increased because of war food requirements, may be reduced. Some crops, such as sugar beets, crops for plastics and soil building crops, may be expanded. To be ready to extend the improvements in transportation brought about by the war to this changed field of production necessitates much advance information and planning. We are hopeful that our studies will help supply this information.

"Advance studies enabled the Burlington, as well as many other carriers, to be ready with the power and the equipment and personnel to provide the nation with transportation in much greater quantity than was formerly believed possible. We will continue without reservation to improve our service to a nation at war. The Burlington already has on order 15 latest-type Diesel-electric road engines, deliveries of which are expected to begin within the next few weeks, and we are prepared to acquire substantial numbers of ultramodern freight and passenger cars just as rapidly as materials are freed for their construction. In the meantime, through studies such as this, we hope to be ready to provide our territory and the nation with improved service and facilities for its peacetime transportation requirements, and to be prepared to assist in its sound and healthy postwar industrial and agricultural development."

Rail Prosperity to Continue After War

A period of continued prosperity for the railroads in the postwar period was envisioned by W. W. Reuss of McLaughlin, Baird & Reuss, stock brokers, in an address before brokers and investment bankers at Chicago on December 6. Gross revenues of the railroads, he said, will amount to between $5,000,000,000 and $6,500,000,000 annually for about six years following the end of the war. He said the railroads could be expected to carry a good percentage of gross revenues to net and expressed the opinion that, with a favorable postwar picture, there is no reason why the market for rail securities should react unfavorably with the circulation of peace rumors.

A. A. R. Divisions to Meet in 1944

In a communication addressed to the chairmen of the Operating-Transportation, Engineering, Mechanical, Purchases and Stores, and Freight Claim divisions of the A.A.R., C. H. Buford, vice-president, operations and maintenance, suggests that these groups arrange to hold annual meetings during 1944. This action is prompted, as stated in the letter to the executive officers of the divisions, by the record traffic that is now being handled and that will probably continue, and the rising trend of accidents and freight claims, pointing to the growing necessity for more attention to the maintenance of roadway and equipment. The letter suggests also that attention be given to "future problems with which the rail-

roads will be faced incident to adjustments and developments occurring after the war is over."

In accordance with this suggestion, the Freight Claim division has announced a meeting at Cincinnati, Ohio, on April 25-27, while the General committee of the Mechanical division, at a meeting on December 1, decided to hold a two-day member meeting in Chicago next June. The Engineering division (the American Railway Engineering Association) is conducting a letter ballot among the members of its Board of Directors looking to a meeting at Chicago on March 14-16.

Uniform Rate Bill

Another bill "to amend the Interstate Commerce Act to provide for the establishment of a uniform classification and uniform scale of class rates for railroad freight" has been introduced in the House by Representative Gossett, Democrat of Texas. It is H. R. 3775.

Agrees with I. C. C. in Limiting Switching Line's Divisions

Because allowances paid by the Hoboken Manufacturers' to Seatrain Lines, its owner, on lighterage-free carload freight handled by it for loading and unloading by Seatrain's "cradles" do not cover any part of its transportation service under such rates and are in addition to the full costs of that service, the switching road is not entitled to an increase in the divisions it now receives out of joint class and commodity rates maintained by it and various trunk lines serving New York Harbor in order to meet these allowances, the Supreme Court of the United States held unanimously in a decision delivered December 6 by Chief Justice Stone.

The case before the court, *Interstate Commerce Commission* vs. *Hoboken Manufacturers'*, resulted from a judgment in the federal district court in favor of the switching road, but the lower court was reversed and the commission upheld in the Supreme Court's decision.

Section 15(6) of the Interstate Commerce Act, which authorizes the division of joint rates applicable to a transportation service, contemplates only the apportionment of the proceeds of that service among the parties to it and not the compensation of others for a service not covered by the joint rates to be divided, said the Chief Justice. "A determination by the commission of the extent of the saving to the rail carrier's attributable to Hoboken's payments to Seatrain was therefore not prerequisite to its order prescribing divisions. And its order is adequately supported by its findings that the rail transportation service begins and ends with the placing of the cars in Seatrain's cradles, and that the ship loading and unloading service forms no part of the rail transportation."

If Seatrain is entitled to compensation from the railroads for the service it performs of loading and unloading cars, so relieving them of the expense of performing that service, the remedy lies, in the court's view, in an increase in Seatrain's rates, or in its divisions of joint water and rail rates, "rather than in its participation, by way of allowances paid to it by Hoboken, in the proceeds of a joint rail service of which it performs no part." In another place, the opinion pointed out that "the prescription of divisions where carriers are unable to agree is not a mere partition of property. It is one aspect of the general rate policy which Congress has directed the commission to establish and administer in the public interest." The question, therefore, "is one for the commission's discretion, reviewable only for unreasonableness, departure from statutory standards, or lack of evidentiary support."

I. C. Gets Safety Award

The Illinois Central was presented on December 8 with the distinguished service and safety award of the National Safety Council for making the greatest reduction in total employee casualty rates in the first seven months of 1943 of any major railroad. This was the first time such an award had been made to a railroad for this type of accomplishment during the seven months. Reportable accidents amounted to 436, compared with 473 in the same period of 1942, the reduction being established in the face of increases in the number of employees and man-hours worked.

Freight Claim Division to Hold Annual Meeting April 25-27

The Freight Claim division of the Association of American Railroads will meet on April 25 in its annual meeting at the Netherland Plaza Hotel, Cincinnati, Ohio, and continue in session if necessary through April 27.

Wheeler to Resign As President of R.B.A.

H. A. Wheeler, president of the Railway Business Association, announced at a meeting of Western members at Chicago on December 2, that he desired to be relieved of the responsibilities as head of that organization but that he would continue his duties as president until his successor is chosen.

A. S. M. E. Railroad Division Elects Officers

At the annual meeting of the American Society of Mechanical Engineers, Railroad Division, held at New York on December 2 and presided over by Chairman J. R. Jackson, engineer of tests, Missouri Pacific, the following officers were installed for the coming year: Chairman J. G. Adair, mechanical engineer, I. C. C., Washington, D. C.; members of Executive Committee RR1, in addition to the chairman; W. M. Sheehan, assistant vice-president, General Steel Castings Corporation, Eddystone, Pa.; K. F. Nystrom, mechanical assistant to vice-president, Chicago, Milwaukee, St. Paul & Pacific, Milwaukee, Wis.; Lt. Col. W. C. Sanders, general manager, Timken Roller Bearing Company, Railroad Division, Canton, Ohio; P. W. Kiefer, chief engineer of motive power and rolling stock, New York Central, New York. E. L. Woodward, western mechanical editor, *Railway Age*, and Mechanical Engineer, continues as secretary.

Incoming new members of the General Committee RR2, with terms expiring in 1948, include: E. R. Battley, general superintendent of motive power and car equipment, Canadian National, Montreal; E. S. Pearce, president, Railway Service & Supply Corporation, Indianapolis, Ind., and W. H. Baselt, mechanical assistant to the vice-president, American Steel Foundries, Chicago. By action of the Executive Committee at a recent meeting in Chicago, H. H. Urbach, mechanical assistant to executive vice-president, Chicago, Burlington & Quincy, Chicago, has been appointed a member of the A. S. M. E., Railroad Division, General Committee, in place of H. P. Allstrand, deceased, Mr. Urbach's term expiring in 1946. C. M. Darden, superintendent of machinery, Nashville, Chattanooga & St. Louis, Nashville, Tenn., has also been appointed a member of the General Committee to fill the vacancy caused by advancing Mr. Kiefer to the Executive Committee. Mr. Darden's term will expire in 1947.

Representation of Employees

As the result of a jurisdictional dispute between the Order of Railroad Telegraphers and the Amalgamated Association of Street, Electric Railway and Motor Coach Employees of America, the National Mediation Board has investigated the issues raised and, after announcing certain conclusions as to the doubts expressed as to the dividing lines between the classes of employees involved, has directed that an election be held to determine what union shall be certified as the representative of towermen on the Chicago, Aurora & Elgin.

Recent decisions of the Supreme Court have clarified the board's final authority in determining jurisdictional disputes.

In the case reported on, the Amalgamated had contended that all employees covered by its agreement with the carrier constitute a single class, for which it is the authorized representative. Such employees included substantially all the road's employees except supervisory and clerical workers, motormen, conductors, and trainmen (including collectors, brakemen and flagmen). The O. R. T. had contended that the road's towermen and its ticket agents, whose duties the board found to be similar to those usually designated as ticket sellers, together form a separate class of employees entitled to vote as such to select an organization to represent them.

The board pointed out that its well-established rule is that "where an agreement covers a number of clearly defined and well-recognized crafts or classes, the employees in each such craft or class are entitled to separate representation if a majority of them so desire." Interlocking towermen are "clearly" members of the recognized class of telegraphers, which includes towermen and station agents, the board held, and these employees—the only employees in that class on the road involved—are entitled to vote separately to select their representative under the board's established principle. The ticket sellers, on the other hand, are part of the class of clerical, office, station and

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 132 reports (Form IBS) representing 136 steam railways by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways For the month of September 1943	1942	For the nine months of 1943	1942
1. Net railway operating income	$110,235,193	$155,062,974	$1,073,142,989	$976,300,976
2. Other income	15,369,609	11,959,470	123,483,804	112,487,439
3. Total income	125,604,802	167,022,444	1,196,626,793	1,088,788,415
4. Miscellaneous deductions from income	2,691,268	4,417,086	22,197,822	24,162,778
5. Income available for fixed charges	122,913,534	162,605,358	1,174,428,971	1,064,625,637
6. Fixed charges:				
6-01. Rent for leased roads and equipment	14,490,151	17,598,338	130,072,117	134,816,618
6-02. Interest deductions[1]	35,409,450	36,894,311	324,740,448	332,636,036
6-03. Other deductions	130,126	119,113	1,113,091	1,060,684
6-04. Total fixed charges	50,029,727	54,611,762	455,925,656	468,513,338
7. Income after fixed charges	72,883,807	107,993,596	718,503,315	596,112,299
8. Contingent charges	2,905,992	2,310,324	21,059,231	20,272,633
9. Net income	69,977,815	105,683,272	697,444,084	575,839,666
10. Depreciation (Way and structures and Equipment)	26,476,148	22,795,440	236,993,876	183,252,977
11. Amortization of defense projects	11,760,704	8,357,959	100,736,406	57,081,776
12. Federal income taxes	127,963,087	88,315,417	1,073,657,058	549,124,373
13. Dividend appropriations:				
13-01. On common stock	9,348,745	7,178,586	95,765,200	81,845,993
13-02. On preferred stock	697,908	1,064,204	20,407,175	19,398,665
Ratio of income to fixed charges (Item 5 ÷ 6-04)	2.46	2.98	2.58	2.27

Selected Aset and Liability Items	All Class I Railways Balance at end of September 1943	1942
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$570,651,166	$508,661,918
21. Cash	1,047,299,233	991,896,200
22. Temporary cash investments	1,637,944,586	443,671,303
23. Special deposits	173,037,839	147,878,309
24. Loans and bills receivable	246,611	998,003
25. Traffic and car-service balances—Dr.	35,920,462	40,935,933
26. Net balance receivable from agents and conductors	171,071,317	141,689,528
27. Miscellaneous accounts receivable	634,758,511	385,020,067
28. Materials and supplies	529,546,132	522,560,019
29. Interest and dividends receivable	23,140,864	21,744,450
30. Rents receivable	1,632,066	1,261,223
31. Other current assets	54,093,972	13,619,410
32. Total current assets (items 21 to 31)	4,308,691,593	2,711,274,445
40. Funded debt maturing within 6 months[2]	80,898,616	105,393,440
41. Loans and bills payable[3]	15,006,866	16,851,200
42. Traffic and car-service balances—Cr.	152,433,570	105,351,625
43. Audited accounts and wages payable	384,013,838	318,302,370
44. Miscellaneous accounts payable	113,837,828	68,506,848
45. Interest matured unpaid	55,950,042	53,777,164
46. Dividends matured unpaid	15,154,565	13,647,535
47. Unmatured interest accrued	65,026,053	71,214,483
48. Unmatured dividends declared	7,475,602	9,756,703
49. Unmatured rents accrued	23,744,900	22,008,805
50. Accrued tax liability	1,614,126,419	838,614,159
51. Other current liabilities	73,720,908	59,799,382
52. Total current liabilities (items 41 to 51)	2,520,490,591	1,577,830,274
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	1,452,729,370	688,686,653
53-02. Other than U. S. Government taxes	161,397,049	149,927,506

[1] Represents accruals, including the amount in default.

[2] Include payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

[3] Includes obligations which mature not more than 1 year after date of issue.

Subject to revision.

storehouse employees, the board held, and so are not entitled to vote separately, or with the towermen, but only as members of their class.

To settle a dispute over representation of licensed and unlicensed deck personnel of the Central of New Jersey, an election was ordered by the board, resulting in the selection of the Railroad Division, Inland-boatmen's Union, Port of New York by a vote of 80 against 24 for the National Organization Masters, Mates and Pilots of America.

C. of Ga. Centennial

A 12-page illustrated brochure has been issued by the Central of Georgia, in commemoration of recent honors accorded the railroad by the Kiwanis and Rotary Clubs of Macon, Ga., when both organizations held special programs celebrating the 100th anniversary of the line's first through train from Savannah to Macon.

There are included in the pamphlet an outline of the railroad's history, photographs of the railroad's first president, William Washington Gordon, an engraving of the first train with its wood-burning locomotive, likenesses of the conductor and engineer who brought the first train in, as well as an advertisement in a Macon newspaper for October, 1843, which quoted passenger fare for the run from Savannah to Macon as $8.00 and for the baggage car, $5.00. There are reprints also of the addresses recently presented before the Rotary and Kiwanis groups, where speakers were: W. A. Crawford, editor of the Central of Georgia Magazine, General Walter A. Harris, local division counsel in Macon, and W. E. Stewart, freight traffic manager at Savannah.

Entitled "The First Hundred Years," the booklet recalls the occasion of the completion of the 191 miles of track between Savannah and Macon, in October, 1843, which gave the "Central Rail Road" the "distinction of being the longest railroad under one management in the entire world." With "Savannah and the Coastal regions only 12 hours away," Macon newspapers noted that "ice, which had formerly cost anywhere from 10 to 20 cents a pound, dropped to four cents," "coastal shad were brought by railroad for sale in Macon," and "epicures and lovers of the good things of life" were invited to call and partake of seafoods brought up daily by railroad.

While there is no record of the equipment that made up the first train to Macon, one speaker remarks that "we did have a record of the locomotives we had in service then, wood-burners all, which averaged 66½ miles for every cord of wood burned. Eight 6-wheelers and five 8-wheelers were in service."

Would Liberalize Tax Law on Deferred Maintenance

Representative Buffett, Republican of Nebraska, has introduced H. R. 3794 for the purpose of "creating a stock pile of post-war work by facilitating deferment of current maintenance." The bill would amend the Internal Revenue Code by inserting a new section with provisions for the carry-back of deferred maintenance.

Would Give Aviation a Place in Cabinet

Representative Bender, Republican of Ohio, has introduced House Joint Resolution 203 to establish in the executive department of the government a department of aviation headed by a secretary of aviation. All federal government functions relating to military or civil aviation would be transferred to the new department.

Vacations with Pay in Canada

The Canadian government's answer to demands of railway unions for wage increases (which go counter to the government's wage "freezing" program, as tempered by a cost-of-living bonus) is apparently going to be an offer of vacations with pay. At any rate the Dominion War Labor Board has granted four groups of employees of the two principal railways, numbering about 37,000, a week's leave with pay, to be effective on January 1 next.

These groups comprise: The Canadian Brotherhood of Railway Employees on the Canadian National; the Brotherhood of Maintenance of Way Employees on both railways; the International Brotherhood of Firemen, Oilers, Round House Railway shop workers, of the Canadian Pacific; and the Brotherhood of Railway Steamship Clerks, Freight Handlers, Express Station employees of the Canadian-Pacific.

The Dominion War Labor Board left in abeyance its decision on the application of 150,000 employees of the two railways for a considerable wage increase. The non-operating groups, totaling on the two roads about 125,000, are asking a wage increase of 23 cents an hour; the operating groups,

numbering about 30,000, are asking a wage increase that will bring their wages up to the level of those paid on eastern lines in the United States. Then there is a smaller group of railway employees, included in the Canadian Brotherhood, who are now getting 42 cents, and who want their pay raised to 50 cents an hour.

Freight Car Loading

Loadings of revenue freight for the week ended December 4 totaled 862,759 cars, the Association of American Railroads announced on December 9. This was an increase of 42,677 cars or 5.2 per cent above the previous holiday week, an increase of 103,028 cars or 13.6 per cent above the corresponding week last year, and an increase of 29,384 cars or 3.5 per cent above the comparable 1941 week.

Loading of revenue freight for the week ended November 27 totaled 820,082 cars, and the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, November 27

District	1943	1942	1941
Eastern	154,636	135,679	181,047
Allegheny	181,078	158,758	184,246
Pocahontas	58,075	50,051	57,588
Southern	119,332	113,324	123,940
Northwestern	109,497	96,920	126,616
Central Western	123,030	117,534	131,915
Southwestern	74,434	71,198	60,828
Total Western Districts	306,961	285,652	319,359
Total All Roads	820,082	743,464	866,180
Commodities			
Grain and grain products	50,889	39,093	40,902
Live stock	16,041	17,001	14,647
Coal	181,812	153,597	164,310
Coke	15,242	13,771	13,370
Forest products	41,905	36,447	44,447
Ore	49,652	44,451	47,396
Merchandise l.c.l.	96,123	81,789	152,503
Miscellaneous	368,418	357,315	388,695
November 27	820,082	743,464	866,180
November 20	882,287	836,762	799,386
November 13	847,683	826,695	883,890
November 6	754,724	829,663	873,582
October 30	883,678	890,560	894,745
Cumulative Total, 48 weeks	39,327,717	39,988,017	39,243,794

In Canada.—Carloadings for the week ended November 27 totaled 75,257 compared with 73,677 for the previous week, and 71,301 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Totals for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
Nov. 27, 1943	75,257	39,799
Nov. 20, 1943	73,677	38,379
Nov. 13, 1943	73,078	36,287
Nov. 28, 1942	71,301	35,232
Cumulative Totals for Canada:		
Nov. 27, 1943	3,177,413	1,806,637
Nov. 28, 1942	3,127,729	1,626,201
Nov. 29, 1941	2,953,138	1,434,906

Whitney and Johnson Would Bar Railroads from Air Transport

A. F. Whitney, president of the Brotherhood of Railroad Trainmen, and Alvanley Johnson, grand chief engineer of the Brotherhood of Locomotive Engineers, this week issued a joint statement taking the position that railroads and railroad affiliates "should not be permitted to operate or control any air line." The statement giving the brotherhood leaders' views "regarding American policy on commercial aviation" was inserted into the December 7 issue of the Congressional Record by Senator Hill, Democrat of Alabama, who called it a "most timely and challenging" pronouncement.

Messrs. Whitney and Johnson asserted that they had given "thought and study to the questions involved as they relate to labor, transportation service, national defense, and post-war peace." Their opposition to railroad participation in air transport is expressed in one of their five conclusions as follows: "Steamship lines, railroads, bus and truck corporations and/or their subsidiaries and/or their holding companies, singly or collectively, should not be permitted to operate or control any air line."

The other four conclusions call for consideration of the possibilities of providing that all licenses issued to foreign flag air lines contain adequate provision for the protection of American wage standards; segregation of United States air lines as between foreign and domestic services and restriction of foreign flag lines to the discharge and pick-up of traffic only at gateway airports in the United States; strict federal regulation of international and domestic air transport; and concentration of American effort into a single strong United States flag line in the international field.

Pullman Transports 17,000,000 of Armed Forces in Two Years

Approximately 17,000,000 members of the armed forces have been transported in Pullman sleeping cars in mass movements since Pearl Harbor, according to George A. Kelly, vice-president of the Pullman Company. To distribute the company's fleet of 7,000 cars expeditiously, its Distribution department has operated on a 24-hour schedule for the last 21 months.

First Army Hospital Train Completes Bond Selling Tour

The first hospital train to be assembled in the United States by the Army for overseas service in World War II arrived in California on December 8 after completing a coast-to-coast bond selling tour embracing Boston, Mass.; Hartford, Conn.; Jersey City, N. J.; Washington, D. C.; Philadelphia, Pa.; Cincinnati, Ohio; St. Louis, Mo.. Kansas City, Mo.; Denver, Colo.; and Salt Lake City, Utah. The cars of the train, built in the Worcester, Mass., shops of the Pullman-Standard Car Manufacturing Company, will be used to remove patients from evacuation hospitals, which are usually located within 25 to 50 mi. of the front lines, to the larger general hospital several hundred miles to the rear. While on its transcontinental tour, the hospital train was handled by regular railroad employees but in the theaters of combat it will be operated and maintained by Military Railway Service personnel of the Transportation Corps., which at the present time are operating converted foreign railway cars as hospital trains.

The train will be stationed in the California-Arizona train area adjacent to San Bernardino where it will be used in training Army Medical department crews in the operation of hospital trains in foreign combat areas. Each of the cars of the new train was limited in length to slightly more than half the length of the ordinary railroad car in order to negotiate the sharp curves, narrow bridges and tunnels of foreign railways. The train differs in appearance from conventional American railroad equipment. The cars are painted with the Army olive drab color and display all hospital and Red Cross markings.

The train consists of 10 cars, including 6 ward cars, a kitchen car, a utility car, a car for officers and nurses and a car for enlisted men. The train is designed to operate as a complete unit and includes facilities for steam heating, fluorescent lighting and electric refrigeration.

October Accident Statistics

The Interstate Commerce Commission on December 8 made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for October and the first 10 months of 1943. The compilation, which is subject to revision, follows:

Item	Month of October		10 months ended with October	
	1943	1942	1943	1942
Number of train accidents*	1,270	1,217	13,409	10,689
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	142	165	1,532	1,760
Injured	112	147	1,184	1,389
Passengers on trains:				
(a) In train accidents*				
Killed	2	..	132	32
Injured	208	55	1,915	889
(b) In train-service accidents				
Killed	2	8	43	43
Injured	214	191	2,264	1,745
Travelers not on trains:				
Killed	1	..	11	15
Injured	94	80	922	695
Employees on duty:				
Killed	82	91	807	762
Injured	3,983	3,390	37,779	27,916
All other nontrespassers:**				
Killed	180	183	1,551	1,774
Injured	624	610	5,476	5,458
Total—All classes of persons:				
Killed	409	447	4,076	4,386
Injured	5,235	4,473	49,540	38,092

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Persons:				
Killed	166	162	1,340	1,586
Injured	435	381	3,230	3,654

Truck Freight in October Showed 2.4 Per Cent Increase Over '42

The volume of freight transported by motor carriers in October increased two per cent over September and 2.4 per cent over October, 1942, according to American Trucking Associations, Inc. Comparable reports were received from 409 motor carriers in 44 states and the District of Columbia. They transported an aggregate of 3,696,916 tons in October, as against 3,624,238 tons in September, and 3,610,601 tons in October, 1942. The A.T.A. index figure, based on the 1938-40 average monthly tonnage of the reporting carriers, was 195.24

for October, compared with 193.72 for September.

Approximately 70 per cent of all tonnage reported for the month was hauled by carriers of general freight. Their volume increased 0.3 per cent over September and 1.7 per cent over October of last year. Transporters of petroleum products, accounting for a little more than 20 per cent of the total, showed an increase of 5.1 per cent over September and 5.8 per cent over October, 1942. Haulers of iron and steel products reported about 4½ per cent of the total tonnage, their volume increasing 9.2 per cent over September and 3.2 per cent over October of last year. Almost 5½ per cent of the total tonnage reported was miscellaneous commodities, including tobacco, milk, textile products, coke, bricks, building materials, cement and household goods. Tonnage in this class showed an increase of eight per cent over September, but decreased 1.3 per cent under October, 1942.

Frees Used Equipment from All L-97 Restrictions

The War Production Board announced on December 4 that all controls it has been exercising over the delivery of used locomotives and used industrial cars have been removed. General Limitation Order L-97, amended, continues W. P. B. control over the production and delivery of new locomotives, however, as does L-97-a over the production and delivery of new railroad cars.

Eastman and Rogers Named for New I. C. C. Terms

Joseph B. Eastman and John L. Rogers have been reappointed by President Roosevelt as members of the Interstate Commerce Commission for new terms expiring December 31, 1950. The President sent the appointments to the Senate on December 2.

Mr. Eastman who is now also director of the Office of Defense Transportation has been a member of the I. C. C. since 1919. Mr. Rogers, a former director of the Bureau of Motor Carriers, is now completing his first seven-year term on the commission.

November Employment 3.55 Per Cent Above November, 1942

Railroad employment decreased 0.3 per cent—from 1,367,817 to 1,363,720—during the one-month period from mid-October to mid-November, but the November total was 3.55 per cent above the comparable 1942 figure, according to the latest summary of preliminary reports prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index number, based on the 1935-1939 average as 100 and adjusted for seasonal variation, was 133.6 for November, compared with 134.0 for October and 129.0 for November, 1942.

The decline in November from the previous month's total was due to a 2.66 per cent drop in the maintenance of way and structures group and a 0.1 per cent decline in train and engine service employees. All other groups showed slight increases over the month before, ranging from 0.24 per cent to 0.61 per cent. Except for the maintenance of way and structures group, where the decrease from the November, 1942, figure amounted to 3.1 per cent, all groups showed a substantial increase over the corresponding month last year. These increases over November, 1942, ranged from 2.16 per cent in train and engine service to 7.87 per cent in the yardmasters, switch-tenders and hostlers classification.

9 Months Net Income Tabulated for Individual Roads

A statement released last week by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission summarizes the net income of Class I roads for the first nine months of this year, showing a total of $697,444,084 as compared with $575,839,666 in the same period of 1942, and tabulates as follows the figures for the individual roads:

Region and railway	Net Income 1943	1942
New England Region	$26,077,101	$20,429,442
Bangor and Aroostook	639,019	428,535
Boston & Maine	5,973,365	6,176,958
Canadian National Lines in New England	d 1,340,700	d 1,090,347
Central Vermont	d 158,724	d 170,949
Maine Central	1,225,234	1,029,669
New York Connecting	349,965	700,003
New York, N. H. & H.†	19,336,366	13,106,470
Rutland*	52,576	163,653
Great Lakes Region	95,261,626	73,368,098
Ann Arbor	416,176	148,452
Cambria & Indiana	364,462	530,600
Delaware & Hudson	3,997,633	3,521,977
Delaware, Lack. & Wn.	4,778,229	3,410,145
Detroit & Mackinac	d 50,507	91,270
Detr. & Tol. Shore Line	562,954	499,787
Erie	8,513,869	11,114,051
Grand Trunk Western	1,590,590	607,799
Lehigh & Hudson River	247,424	330,260
Lehigh & New England	826,667	885,116
Lehigh Valley	5,059,675	3,567,520
Monongahela	578,625	799,560
Montour	587,038	552,493
New York Central[1]	47,659,941	32,129,045
New York, Chi. & St. L.	6,968,235	6,030,072
New York, Ontario & Western†	d 773,707	d 859,857
New York, Susq. & W.†	388,457	211,729
Pere Marquette	3,168,737	2,153,780
Pittsburgh & Lake Erie	3,314,450	3,163,276
Pittsburg & Shawmut	d 134,992	d 76,390
Pittsburgh & West Va.	936,040	838,459
Pitts., Shaw. & North.*	d 497	d 47,348
Wabash	6,262,127	3,766,302
Central Eastern Region	124,726,851	112,703,837
Akron, Can. & Young.†	202,137	79,499
Baltimore & Ohio	32,932,514	22,842,422
Bessemer & Lake Erie	563,348	1,259,732
Cen. R. R. of N. J.†	1,580,683	2,997,760
Chicago & Eastern Ill.	2,201,538	1,416,712
Chi. & Illinois Midld.	497,583	466,638
Chi., Ind. & Lsvle.†	1,461,373	593,198
Detr., Toledo & Ironton	1,507,500	1,067,092
Elgin, Joliet & Eastern	930,954	1,665,849
Illinois Terminal	746,176	1,261,657
Long Island	2,752,732	819,546
Missouri-Illinois†	322,673	500,710
Pennsylvania	63,452,378	63,598,516
Penna.-Reading Seash're	759,937	d 769,892
Reading	8,371,387	10,390,344
Western Maryland	3,787,452	2,658,156
Wheeling & Lake Erie	2,656,486	1,855,898
Pocahontas Region	47,074,799	39,924,292
Chesapeake & Ohio	23,637,179	18,639,706
Norfolk & Western	16,485,721	15,143,591
Richm., Fr. & Potomac	2,965,965	2,224,092
Virginian	3,985,934	3,916,903
Southern Region	108,103,884	95,524,623
Alabama Gt. Southern	2,390,335	1,652,040
Atlanta & West Point	389,989	451,709
Atlanta, Birm. & Coast	612,158	324,746
Atlantic Coast Line	11,785,991	13,485,028
Central of Georgia†	3,355,621	2,181,210
Charleston & W. Caro.	401,261	437,274
Cin., N. Orl. & Tex. P.	3,331,600	2,166,387
Clinchfield	2,461,865	2,715,130
Columbus & Greenville	40,589	69,717
Florida East Coast†	5,582,056	2,927,531
Ga. R. R.-Lessee Org.	2,653,969	2,054,890
Georgia & Florida*	d 390,310	d 451,613
Georgia South. & Fla.	649,900	438,748
Gulf & Ship Island	d 193,032	208,407
Gulf, Mobile & Ohio	2,556,097	2,609,769
Illinois Central	16,269,593	7,568,409
Louisville & Nashv.	13,861,379	10,193,990
Mississippi Central	145,763	191,529
Nash., Chat. & St. L.	2,584,725	2,600,639
New Orl. & Northeast.	1,086,432	1,226,704
Norfolk Southern	437,995	516,227
Seaboard Air Line*	16,340,532	14,475,088
Southern	18,036,377	18,250,812
Tennessee Central	487,351	157,854
Western Ry. of Alab.	476,656	579,884
Yazoo & Miss. Valley	2,748,992	8,492,514
Northwestern Region	80,883,205	41,545,816
Chicago & N. Western†	16,490,522	5,793,915
Chicago Gt. Western	2,041,857	1,352,375
Chi., M., St. P. & P.†	22,508,762	6,302,772
Chi. S. P., M. & Omaha	1,852,188	226,438
Dul., Mis. & Iron Range	6,114,312	4,703,336
Dul., S. Sh. & Atlan.†	192,320	79,451
Duluth, Win. & Pac.	d 143,825	d 229,081
Great Northern	13,030,666	15,143,138
Green Bay & Western	459,950	211,621
Lake Sup. & Ishpeming	714,062	750,993
Minneapolis & St. L.*	296,382	d 377,286
M., St. P. & S. S. M.†	d 1,049,864	d 2,675,462
Northern Pacific	13,451,059	7,968,561
Spokane International	141,971	166,148
Spok., P. & Seattle	1,782,843	2,128,897
Central Western Region	151,706,768	128,995,152
Alton**	1,776,112	2,072,637
Atch., Top. & S. Fe.[2]	38,305,455	45,073,065
Chi., Burl. & Quincy	26,478,399	17,259,074
Chi., R. I. & Pac.†	22,932,965	14,070,144
Colorado & Southern	1,812,644	883,944
Colorado & Wyoming	135,639	146,508
Den. & R. Gr. W.†	8,977,201	7,691,049
Denver & Salt Lake	420,972	420,409
Ft. Worth & Denver Cy.	1,961,412	1,478,003
Nevada Northern	108,024	121,577
Northwestern Pacific	d 142,864	d 544,524
Southern Pacific	8,059,523	3,885,549
South. Pacific System[3]	52,203,179	47,587,980
Toledo, Peoria & W.[4]	1,736,735	529,497
Union Pacific	32,708,005	31,424,178
Utah	41,189	57,622
Western Pacific†	6,395,357	4,426,420
Southwestern Region	63,609,850	63,348,406
Beau., S. L. & West.†	809,994	1,907,953
Burlington-Rock Island	d 91,832	d 472,478
Internatl.—G. Northern†	1,263,221	1,365,748
Kansas City Southern	2,595,664	3,312,189
Kan., Okla. & Gulf	433,107	365,833
Louisiana & Ark.	949,018	977,357
Midland Valley	90,682	d 18,448
Missouri & Arkansas	24,453	42,057
Missouri-Kan.-Tex.	2,938,456	2,845,459
Missouri Pacific†	16,454,160	21,310,822
N. Orl., Tex. & Mex.†	d 570,341	323,639
Okla. City-Ada-Atoka	216,191	214,045
St. L., B. & Mexico†	1,613,746	2,046,982
St. Louis-San Fran.†	8,246,203	6,864,550
St. L., S. Fran. & Tex.	669,652	680,114
St. L. Southwestern†	6,083,302	4,274,408
San Ant., U. & Gulf†	d 120,463	d 419,576
Texas & New Orleans	17,131,518	12,261,615
Texas & Pacific	4,543,924	5,215,938
Texas Mexican	329,195	250,199

* Report of receiver or receivers.

† Report of trustee or trustees.

d Deficit or other reverse items.

[1] Includes Boston & Albany, lessor to New York Central.

[2] Includes Atchison, Topeka & Santa Fe, Gulf, Colorado & Santa Fe, and Panhandle & Santa Fe.

[3] Data not included in totals. Includes Southern Pacific Company, Texas & New Orleans, and leased lines.

[4] Operated by Federal Manager.

Milwaukee Traffic More Than Double

Freight shipments handled by the Chicago, Milwaukee, St. Paul & Pacific in the first nine months of 1943, measured in ton miles, increased 102 per cent over the same period of 1939, according to H. A. Scandrett, trustee of the railroad, in a message to the road's employees in the Milwaukee magazine for December.

Pointing to the performance figures to show how well the Milwaukee is doing its share of the transportation job that has enabled our military forces to carry on successfully, Mr. Scandrett disclosed that the huge increase, from 6,621,064,000 revenue ton miles handled in the first nine months of 1939 to 13,381,152,000 in the same period in 1943, was handled in only 20 per cent more carloads because the road put 28 per cent more tons in the

average car and ran each car an average of 59 per cent more miles per day. The average distance each ton was hauled increased 22 per cent.

Revenue passengers carried in the first nine months of 1943 increased 177 per cent over the same period in 1939 and passenger miles increased 302 per cent—four times the movement in 1939. The average number of passengers per train increased 235 per cent and the length of the average passenger trip increased 45 per cent. During the first nine months of 1943 the road carried 5,079,047 paying passengers, compared with 1,836,437 in the same period in 1939.

Trend of Earnings Continues Downward

(*Continued from page 946*)

the total of such accruals amounted to $103,721,000.

After looking over earnings available for fixed charges, the Bureau thought it "of interest to note" that for September, the ratio of income available for fixed charges to fixed charges "was slightly more favorable for the roads in receivership and trusteeship than for those not under reorganization, the respective ratios being 2.46 versus 2.45." For the nine months ended with September, however, the ratios were 2.44 and 2.62, respectively.

Dividends on common stock accrued for the first nine months amounted to $95,765,200 or $13,919,207 more than for the comparable 1942 period. Cash and temporary cash investments of Class I roads, less accrued tax liability, amounted to $1,071,000,000 on September 30 as compared with $596,950,000 on September 30, 1942.

Per Ton-Mile Costs. — The Bureau's analysis of data on revenues and expenses per ton-mile points out that the ton-mile revenue declined from 9.28 mills in the second quarter of 1942 to 9.2 mills in the corresponding 1943 period. Meanwhile operating expenses per ton-mile rose from 5.23 mills to 5.54 mills. Taking 1935 as 100, it is shown that by 1942 the revenue per ton-mile "declined relatively less than the expenses per ton-mile," the respective 1942 index figures being 94 and 85.

The analysis further undertakes to calculate what the revenue per ton-mile would have fallen to between 1935 and 1942 if the depressing effects of longer hauls and changes in the composition of traffic had not been offset by rate changes. The actual 1935 revenue per ton-mile was 9.88 mills, while the 1942 figure was 9.32 mills. The Bureau estimates that the impact of the longer hauls and changed character of traffic would have driven the latter down to 8.79 mills had not freight rate increases intervened in 1937 and 1938, and 1942. It also lists other factors which have had the influence, such as the increase in the proportion of freight subject to land-grant deductions, and various voluntary rate changes made by the carriers.

The "Burden" of Large Salaries. — Reference is made to the Bureau's recent compilation of railway officer salaries in excess of $10,000 a year. There it is calculated that there would have been a saving of $8,984,349 or 0.12 per cent of operating revenues if no 1942 salary had exceeded $10,000. "In giving the results of these computations," the comment continues, "it is not suggested that such a reduction in salaries should be made. They are intended merely to show the relative burden of what might be called salaries for high officials in excess of a minimum."

I. C. C. Upheld in Grandfather Clause Finding

When the Interstate Commerce Commission required an applicant for grandfather rights authority for motor vehicle operations to limit its future operations to the type of equipment and service previously offered, it acted within its power and in accord with the purpose of Congress in subjecting highway operations to regulation, the Supreme Court of the United States held December 6. Justice Reed delivered this unanimous opinion of the court in the *Crescent Express Lines* vs. *United States* case.

The operator had been engaged in seasonal, non-scheduled door-to-door transportation of persons between New York and a New York state resort area, using regular passenger automobiles, and the certificate issued by the commission restricted its operations to such irregular service with loads limited to six passengers in any one vehicle. The operator had sought court relief from these limitations. In affirming the lower court's finding upholding the commission, Justice Reed said: "If the holder of a grandfather certificate for this distinctive door-to-door service could develop his operations so that they would be substantially those of a bus line, the ability of the commission to carry out its duties of regulation in the public interest would be seriously impaired. . . . When Congress provided for certificates to cover all carriers which were already in operation, it did not throw open the motor transportation system to more destructive competition than that already existing."

Club Meeting

D. L. Tilly, a director of the American Short Line Railroad Association and president of the New York Dock Railway, will discuss the short lines and their position in the industry, at the December 17 meeting of the New York Division of Railroad Enthusiasts, Inc., to be held in Grand Central Terminal, Room 2728, at 8 p.m. The Denver & Rio Grande Western color-sound movie "Rails to Rainbows End" will be presented and officers will be installed for the coming year.

Maurice K. Dugan, special representative, Office of Trustees, New York, New Haven & Hartford, will discuss "Railroad Public Relations" at the forthcoming meeting of the Railway and Locomotive Historical Society, to be held December 17, 7:45 p.m., in the Engineering Societies building, New York. The New Haven film—"A Great Railroad at Work"—is to be presented as well. A further feature will be the showing of the new Atchison, Topeka & Santa Fe war movie, "Loaded for War." This film, which is in technicolor, has just completed special preview runs in New York railroad and newspaper circles.

Equipment and Supplies

Expect 50,000 Freight Cars Next Year; 30,000 All-Steel

Coming through with an official confirmation of recent reports, the War Production Board announced this week that it will approve the construction of all-steel freight cars in the 1944 program, thus abandoning the policy of insisting that the railroads order the so-called composite-type cars. Likewise confirmed by the announcement were previous predictions that next year's production of freight cars for domestic use will total approximately 50,000 cars.

The 50,000 figure is built up out of the some 34,000 cars now scheduled, plus some 5,000 ordered but not definitely scheduled for production, plus some 10,000 which are expected to be ordered if pending proposals to extend the five-year amortization plan on railway equipment are adopted. While the material situation has now eased to the point where allocations could perhaps be obtained for more than 50,000 cars, it is not expected that car building facilities for more than that number for domestic service will become available next year.

W. P. B.'s decision to abandon its insistence upon the composite-type car was reported in the *Railway Age* of December 4, page 918. This week's announcement stated that the all-steel cars would get into production next June and that 30,000 of the 1944 total would be of that type.

"The new steel cars, made possible by an available supply of that metal, and a concomitant shortage of lumber," said the W. P. B. announcement, "will be known as the 'victory design.' Railroad men expressed themselves as being pleased at the prospect of being able to obtain these new all-steel cars primarily because they will considerably reduce the maintenance necessary on the composite type, and in addition they will carry approximately 300 cubic feet more freight. Equally important, from the standpoint of the manufacturers is the fact that the all-steel car takes less time and manpower to construct."

Frisco to Spend $2,483,162 for Betterments in 1944

Trustees for the St. Louis-San Francisco have petitioned the District Court at St. Louis, Mo., for authority to spend $2,483,162 during 1944 for additions and betterments to the road and its subsidiaries. Of this amount, $844,869 is for the construction of 4.12 miles of main line from the Gasconade River bridge to Franks, Mo., which will eliminate 11 curves, reduce grades and reduce the distance between Newburg, Mo., and Dixon, one mile. Also included in the Frisco budget is $344,624 for new rails and other track materials.

LOCOMOTIVES

The BALTIMORE & OHIO has ordered six Diesel-electric switching locomotives of 660 hp. from the American Locomotive Company and seven Diesel-electric switching

locomotives of 1,000 hp. from the Baldwin Locomotive Works, subject to War Production Board authorization.

The WABASH has asked War Production Board approval for orders for four Diesel-electric switching locomotives, including one of 660 hp. and three of 1,000 hp.

FREIGHT CARS

The ST. LOUIS-SAN FRANCISCO has ordered 250 41½-ft. composite gondola cars of 50 tons' capacity from the railroad's own shops.

The SEABOARD AIR LINE has ordered 200 40½-ft. steel box cars of 50 tons' capacity and 200 40-ft. 8-in. steel hopper cars of 70 tons' capacity from the Pullman-Standard Car Manufacturing Company. The inquiry for this equipment was reported in the *Railway Age* of September 11.

The SOUTHERN PACIFIC has ordered 200 41½-ft. composite gondola cars of 50 tons' capacity from the Pressed Steel Car Company for the Texas & New Orleans. The cars have been released for building by the War Production Board and deliveries are reported to be scheduled for the second quarter, 1944.

The NORTHERN PACIFIC has ordered 1,000 40½-ft. box cars of 50 tons' capacity allocating 750 to the Pullman-Standard Car Manufacturing Company and 250 to the Pressed Steel Car Company. War Production Board authority for building has been received and deliveries are reported to be scheduled for May and June, 1944. The railroad was reported considering the purchase of 750 box cars in the *Railway Age* of September 25.

ONE PENNSYLVANIA RAILROAD FAMILY is 100 per cent engaged in the war effort. The father, Thomas Lynam, of Wilmington, Del., an employee of the railroad for the past 36 years, is a machinist in the local car shops. He is also an air raid warden in his district. His wife is an assistant block warden in the same sector. Three sons are in the armed services, and a fourth, James P. Lynam, 27, released recently from the Army on a medical discharge, is now employed as a machinist in the Pennsylvania enginehouse in Wilmington. The three Lynam daughters are active in Red Cross and civilian defense organizations.

SCHOOL FOR RED CAPS—When the Central Passenger Station (C. N. R.) was built at Montreal, its impressive size and design at once indicated a need for more Red Caps than were then in service at the old Bonaventure station. The architectural pattern of the new station, with more "footwork" between track level and station exists, made it clear that new boys added to the group would require special instruction. A school was, accordingly, set up offering instruction in all essentials of redcapping. Its "Dean" is Henri Lalonde, in his 40th year as a Red Cap, and now a supervisor who no longer totes bags. Mr. Lalonde instructs his boys to conduct themselves with military bearing, both appearance and deportment ranking high in the curriculum.

Supply Trade

A. G. Wood, formerly sales agent at the Chicago sales offices of the **American Car & Foundry Co.,** has been appointed

A. G. Wood

district sales manager of the a.c.f. Washington, D. C., sales office. Mr. Wood joined the a.c.f. Berwick, Pa., shops in May, 1917. He was assigned to electric rivet heater service and sales in Chicago

Dudley L. O'Brien

in September, 1920, continuing there until 1931 when he was transferred to the Chicago sales department as sales agent.

Dudley L. O'Brien, former sales agent at the a.c.f. Cleveland, Ohio, office, has been appointed district sales manager of the Cleveland office to succeed R. A. Williams, whose election as a vice-president of the company and transfer to the New York general offices was reported in the *Railway Age* of December 4. Mr. O'Brien was formerly employed on the Chesapeake & Ohio. He joined the operating department of the Huntington, W. Va., plant of the American Car & Foundry Co. in March, 1919. He was transferred to the sales department and worked in the field from 1931 to 1937, in which latter year he was appointed sales agent in the Southwestern territory. He was appointed sales agent at the Cleveland office in October, 1942.

Thomas L. Hughes, has been appointed Western sales manager of the **Lehigh Portland Cement Company** with headquarters at Chicago.

A. C. Lewis, special representative in the sales department of the **Railway & Power Engineering Corp. Ltd.,** has resigned to become vice-president in charge of sales of **Templeton, Kenly & Co.,** Chicago, effective January 1.

O. O. Lewis, branch manager of **Fairbanks, Morse & Co.,** Chicago, with headquarters at Atlanta, Ga., has been promoted to assistant general sales manager with headquarters at Chicago and has been succeeded by **G. N. Van Epps,** manager of the Diesel department of the Chicago branch. **V. O. Harkness,** branch manager at Dallas, Tex., has been promoted to manager of the Diesel Engine Sales division and has been succeeded by **H. J. Renken,** manager of the Oil Field division at Dallas, who will continue as manager of the Oil Field division. **J. S. Peterson,** manager of the scale department of the Cincinnati branch has been promoted to branch manager at Cincinnati, Ohio, to succeed **Stanley Eaton,** deceased.

OBITUARY

David W. McNaugher, vice-president and treasurer of the Robert W. Hunt Company, Chicago, whose death at Pittsburgh, Pa., on November 24, was announced in the *Railway Age* of December 4, was born in 1859 and was graduated from Westminster College in 1881 and from Rensselaer Polytechnic Institute in 1885. He began his career as an engineer as a member of the engineering firm of G. W. G. Ferris & Co. which, after the death of Mr. Ferris, became the Hallsted & McNaugher Co. In

David W. McNaugher

1900, when this company was merged with the Robert W. Hunt Company, Mr. McNaugher was elected vice-president and treasurer, which position he held until his death.

News Department continued on next left-hand page

INSPECTOR MARS

HAS AN X-RAY EYE

In a few months of this staggering wartime traffic, Inspector Mars brings out facts about locomotives that might well have lain hidden through years of peacetime service. He brings out the bad . . . *and he brings out the good, too.*

He brings out the extra stamina and the greater mileage resulting from Lima's insistence upon the highest standards of design, workmanship, and materials. He brings out the greater availability that flows from Lima's unremitting care and attention to the closest possible approach to perfection in every last detail. And—perhaps most convincingly of all—he brings out the outstanding economic superiority of Lima-built Modern Super-Power Steam Locomotives, and their essential place in our system of transport.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

Financial

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—This road has filed a supplementary application with the Interstate Commerce Commission for approval of its assumption of liability for an additional $3,097,000 of series M equipment trust certificates, this being another portion of the total issue of $10,760,000 previously approved by Division 4 of the commission, with Commissioner Porter dissenting.

FLORIDA EAST COAST.—*Equipment Trust Modification.*—Division 4 of the Interstate Commerce Commission has approved the cancellation of $430,000 of this road's unissued series J 2¾ per cent equipment trust certificates and modified its order authorizing the sale of this issue to the Reconstruction Finance Corporation to limit the amount sold to $570,000 and to reduce the term of the lease from 10 years to 6, as a portion of the equipment the road proposed to purchase is not available during the war.

FORT DODGE, DES MOINES & SOUTHERN. —*Reorganization Expenses.*—Division 4 of the Interstate Commerce Commission has approved maximum amounts of final allowances of compensation for services rendered and expenses incurred in the proceedings involving this road's reorganization. The total of claims of various counsel, protective committees and the reorganization committee was $50,456, of which the division approved $36,366, allowing part or all of practically all claims, but scaling down many, particularly counsel fees. The largest claim was that of J. L. Parrish, Jr., counsel for the reorganization committee, for $10,414, of which the division approved $6,914.

KANSAS CITY SOUTHERN. — *Promissory Notes.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue four promissory notes in the total amount of $278,400 in evidence of, but not in payment for, the unpaid purchase price specified in a conditional sale agreement for the purchase of four 1,000 h.p. diesel-electric road-switcher locomotives from the American Locomotive Co. While the road has funds on hand sufficient for full cash payment for the equipment, the division pointed out, it expects to realize an annual interest saving of $14,062 through issuing these notes at an annual cost of 1.7 per cent and employing the equivalent amount of cash for the retirement of 5 per cent bonds.

MINNEAPOLIS & ST. LOUIS.—*Receivership Ended.*—This railroad began corporate operation on December 1 after 20 years and six months of receivership, the longest in railroad history. Announcement was made by L. C. Sprague, president, following a meeting in New York attended by W. W. Colpitts of Coverdale & Colpitts, New York City; C. W. Wright of Minneapolis, vice-president-general counsel; and representatives of the several protective committees, their depositaries, the corporate trustee and New York and Minneapolis fiduciaries.

Following delivery of general mortgage bonds, series A (4 per cent income), and payment of cash to the distributing agents allocated to the preferred claimants and to the holders of Merriam Junction bonds and the issuance and distribution of common stock of the company in accordance with the plan of reorganization and transfer by the receiver of the Minneapolis & St. Louis Railroad Company of cash on hand to the new company, it was stated that these actions as of this date have transferred ownership and operation of the Minneapolis & St. Louis Railroad to the new companies, the Minneapolis & St. Louis Railway Company and its wholly-owned subsidiary, the Minneapolis & St. Louis Railroad Corporation.

It was also announced that interest will be payable on the Minneapolis & St. Louis Railway Company general mortgage bonds, series A (4 per cent income) for the month of December, 1941, and for the year 1942. There are $2,015,000 outstanding of this class. These interest payments will be made forthwith upon presentation of coupons to the corporate trustee, First National Bank of Minneapolis. President Sprague gave his opinion that following the consummation of the plan, it may be possible to redeem the $2,015,000 in outstanding bonds in 1944, as there is sufficient cash in possession of the new company to make such a step possible in the near future. Mr. Sprague also advised the meeting that when such redemption has been accomplished in 1944, the new company would have outstanding 150,000 shares of comon stock, no par value, and approximately $1,000,000 of equipment trusts which are currently reduced on a monthly basis. This stock is not listed on the Stock Exchange at present.

Officers of the new company, in addition to President Sprague are H. W. Ward, vice-president traffic; J. W. Devins, vice-president-general manager; C. W. Wright, vice-president-general counsel; G. A. Anderson, comptroller; M. E. Eaton, secretary, and W. C. Knoble, treasurer. New directors are J. M. Chilton, G. B. Webster, M. A. Lehman, D. J. Strouse, B. C. Gamble, V. F. Rotering, C. E. Hill, and Mr. Sprague, all of Minneapolis, and A. W. Benkert, Gen. John Ross Delafield and Jesse E. Waid, all of New York City.

NEW YORK CENTRAL.—*Trackage Rights.* —This road has applied to the Interstate Commerce Commission for authority to operate under trackage rights over a 1.36-mile line of the Grand Trunk Western at Bay City, Mich., in lieu of an unfavorably located connecting track.

NEW YORK, NEW HAVEN & HARTFORD.— *To Pay Bond Interest.*—On December 6, trustees of the New Haven received permission from the United States district court at New Haven, Conn., to pay $646,840 in semi-annual interest bonds of the

Dividends in First Nine Months

Dividends appropriated by Class I roads during the first nine months of this year amounted to $116,172,375, as compared with $101,244,658 for the same period last year, according to statistics compiled by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The total federal income taxes of the same roads during the first nine months of this year amounted to $1,075,657,058, as compared to $549,124,373 in the same 1942 period.

Amounts appropriated for dividends during the nine months are tabulated below for individual roads that made such appropriations:

	First 9 mos. 1943	1942
Alabama Great Southern	$1,008,932	$1,008,932
Atchison, Topeka & Santa Fe	14,026,090	15,239,620
Atlanta & West Point	73,908	98,544
Atlantic Coast Line	1,240,059	4,918
Bangor & Aroostook	239,250	.....
Cambria & Indiana	180,000	180,000
Charleston & W. Carolina	72,000	72,000
Chesapeake & Ohio	17,686,628	17,686,585
Chicago & East. Illinois	767,726	.....
Chicago Great Western	915,269	228,815
Cincinnati, New Orleans & T. P.	1,886,002	1,886,002
Colorado & Wyoming	.....	125,000
Detroit & Toledo Shore Line	330,000	180,000
Detroit, Toledo & Ironton	490,664	490,664
Duluth, Missabe & I. R.	4,112,500	.....
Erie	3,232,912	3,182,030
Great Northern	2,498,899	2,498,896
Green Bay & Western	125,000	125,000
Illinois Terminal	500,000	500,000
Kansas, Oklahoma & Gulf	93,384	179,565
Lake Superior & Ishpeming	321,300	321,300
Lehigh & Hudson River	164,745	211,815
Louisiana & Arkansas	225,000	225,000
Louisville & Nashville	5,850,000	5,850,000
Maine Central	108,960	.....
Montour	.....	255,000
Nashville, Chat. & St. L.	255,982	.....
New York Central	3,223,697	.....
Norfolk & Western	10,996,669	11,000,300
Pennsylvania	13,167,754	13,167,754
Pittsburgh & Lake Erie	2,159,125	1,727,300
Reading	3,149,489	3,148,489
Richmond, Fred. & Pot.	435,229	435,229
Southern	2,596,400	750,000
Southern Pacific	3,772,763	.....
Tennessee Central	17,500	17,500
Texas & Pacific	592,575	592,575
Union Pacific	13,984,819	13,984,819
Virginian	4,022,663	4,022,663
Western of Alabama	120,000	150,000
Wheeling & Lake Erie	1,529,482	1,698,343

New England and Central New England railroads, subsidiaries of the New Haven.

SEABOARD AIR LINE.—*Compromise Plan Confirmed.* — On December 2, Federal Judge W. Calvin Chesnut, of the United States district court at Baltimore, Md., approved the compromise plan for reorganization of the Seaboard Air Line. The months either the reorganization should be put through, bankruptcy proceedings judge stated that within two or three started, or the receivership dismissed outright by court order. Dissatisfied security holders have 30 days to file an appeal.

Average Prices Stocks and Bonds

	Dec. 7	Last week	Last year
Average price of 20 representative railway stocks..	34.76	33.62	27.61
Average price of 20 representative railway bonds..	78.69	78.53	67.75

Dividends Declared

Baltimore & Annapolis.—Preferred, $2.40, initial, payable December 22 to holders of record December 10.

Chicago Great Western.—5% preferred (accum.), $1.25, payable December 27 to holders of record December 14.

Dayton & Michigan.—8% preferred, $1.00, quarterly, payable January 4, 1944, to holders of record December 15.

East Mahanoy.—$1.25, semi-annually, payable December 15 to holders of record December 4.

Elmira & Williamsport.—7% preferred, $1.60, semi-annually, payable January 3, 1944 to holders of record December 20.

Mobile & Birmingham.—4% preferred, $2.00, semi-annually, payable January 3, 1944, to holders of record December 1.

Nashville & Decatur.—7½% preferred, 93¾¢, semi-annually, payable January 3, 1944, to holders of record December 21.

Oahu Railway & Land.—75¢, year-end, payable December 11 to holders of record December 4.

Pittsburgh, Fort Wayne & Chicago.—Common, $1.75, quarterly, payable January 3, 1944, to holders of record December 10.

Rome & Clinton.—$2.00, payable January 3, 1944, to holders of record December 21.

Abandonments

CHICAGO, BURLINGTON & QUINCY.—This company has applied to the Interstate Commerce Commission for authority to abandon a portion of a branch from Mt. Ayr, Iowa, to Grant City, Mo., 21.8 miles.

MISSOURI-KANSAS-TEXAS. — In a proposed report in Finance Docket No. 14218 Examiner Lucian Jordan has recommended that the Interstate Commerce Commission authorize this road's subsidiary, the Missouri-Kansas-Texas of Texas, lessee, and the Texal Central to abandon operation of and to abandon, respectively, a branch from DeLeon, Tex., to Cross Plains, 41.87 miles.

CHICAGO, BURLINGTON & QUINCY.—Division 4 of the Interstate Commerce Commission, with Commissioner Miller dissenting, has denied this road's application for authority to abandon its line from Sterling, Colo., to Cheyenne, Wyo., 105 miles, without prejudice to a renewal of the application six months after the termination of the war. The division majority, Commissioners Porter and Mahaffie, held that abandonment is not now justified in the public interest, even though the line has been operated at a loss, because it would leave "an exceptionally large area" without adequate substitute transportation facilities at a time when further agricultural development of the area has been undertaken. In his dissent, Commissioner Miller remarked that "the majority is unduly perturbed as to the truck situation." In 1942, the best recent year, he pointed out, the 1952 sq. mi. that would be affected produced an average of 2.72 carloads of freight for each weekday, requiring a 105-mile trip. This volume of freight is not so great, he concluded, that it cannot be handled by trucks to other rail points without undue inconvenience.

NEW YORK CENTRAL.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a 686-ft. segment of a branch line in Dunkirk, N. Y.

PENNSYLVANIA.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon 5.54 miles of branch lines in Pennsylvania, including an 0.81-mile segment of the Sterling No. 2 branch, a 0.64-mile segment of the Bellwood branch, a 0.48-mile segment of the Snow Shoe branch, and the 3.61-mile Morgan Run branch.

READING.—This company has applied to the Interstate Commerce Commission for authority to abandon a 3.87-mile segment of its Helfenstein branch, which gave access to a coal mining section that is no longer productive.

SWITZERLAND now has a form of control over owners of private cars, to prevent the sale of such cars after they have entered another country. The Railway Gazette (London) reports that authorization must be secured to dispatch any car, loaded or empty, from the country. There is a 30-day limit for its return to Switzerland, and under export control rulings, failure to do so is a punishable offense.

DUTCH RAILROADS.—A recent issue of Foreign Commerce Weekly reveals the Netherlands transportation system to be in a chaotic state, with travel either by train, bus or private motor car virtually impossible. Large numbers of railroad cars and automobiles have been "exported" to Germany, and remaining rolling stock is engaged in constant transport of Nazi troops, with equipment rapidly deteriorating for want of repairs. It is reported 70 locomotives and 3,000 freight cars have been sent to Germany, with large numbers of passenger cars, tank cars and refrigerator cars being devoted exclusively to the German war effort. Over 200 miles of track, together with switches and accessories, have been moved to the Reich. (In 1939, the last figures available, Netherlands Railways operated 891 locomotives, 28,091 freight cars and 3,100 passenger cars. Trackage totaled 2,060 miles).

SNOW PLOWS.—Since July, three car shops of the Canadian National have been engaged in conditioning the railroad's 271 snow plows. All are now ready for service, reports G. K. McCoy, assistant chief of car equipment.

Mr. McCoy also disclosed that a thorough inspection of the steam line and connections of all passenger equipment has been made. "This will improve the control of car temperature and should provide extra comfort to winter travelers," he said.

Railway Officers

EXECUTIVE

Everette A. Craft, assistant to the executive vice-president of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., has been promoted to vice-president, with the same headquarters, succeeding **Andrew D. Mims,** whose death on October 30 was reported in the *Railway Age* of November 13. Mr. Craft was born at Danville, Ill., on September 11, 1893, and entered railway service in October, 1909, as a chainman on the Chicago & Eastern Illinois. He was later promoted to transitman and in 1914, he was advanced to assistant division engineer of the Evansville division, later being transferred successively to the Illinois and the Chicago divisions. In June, 1917, has was commissioned first lieutenant in the Engineer's Officers Reserve Corps, assigned with the 17th Engineers (Railway) at St.

Everette A. Craft

Nazaire, France. Mr. Craft was transfered to the Transportation Corps on November 1, 1917, and from January 1, 1918 to August, 1919, was a superintendent in the army transport service, receiving a commission as captain in October, 1918, and as major in February, 1919. He returned to the C. & E. I. as assistant engineer at Danville in October, 1919. In December, 1919, he went with the Southern Pacific Lines in Texas and Louisiana, as division engineer of the El Paso division, with headquarters at El Paso, Tex., and four months later he was appointed assistant to the engineer maintenance of way, with headquarters at Houston. In September, 1920, he was appointed assistant to the chief engineer. Mr. Craft was advanced to engineer maintenance of way in October, 1926, and on March 16, 1939, he was promoted to the position he held at the time of his new appointment.

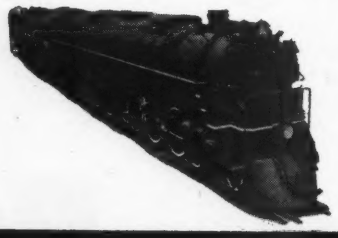
George C. Smith, assistant to the president of the Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., has resigned to become president of the St. Louis Chamber of Commerce. Mr. Smith was

News Department continued on second left-hand page

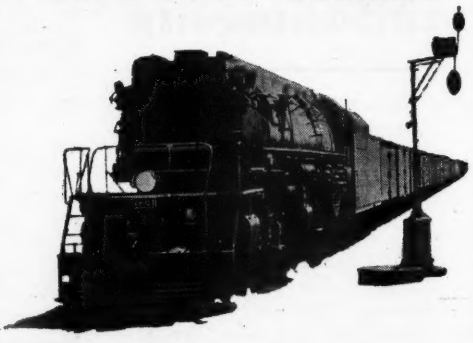
SECURITY

1

FOR INCREASED AVAILABILITY



2 FOR POSITIVE FLOW OF WATER OVER CENTER OF CROWN SHEET



5

FOR REDUCED CINDER CUTTING

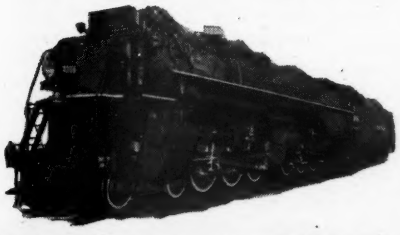
AMERICAN

60 EAST 42ND STREET

CIRCULATORS

3

FOR REDUCED HONEYCOMBING



4

FOR REDUCED FLUE PLUGGING

FOR BETTER ARCH BRICK SUPPORT

6

ARCH COMPANY, INC.

NEW YORK 17, N. Y. • *Security Circulator Division*

born at Newton, Kan., in 1887, and at the age of 14 years obtained his first railroad experience as a platform clerk with the Wells Fargo Express Company at Norman, Okla. He was graduated from the University of Oklahoma at the age of 21 and then continued his academic studies at the University of Wisconsin and Cornell University. Later he became a member of the faculty of Cornell University, teaching business organization and management, corporation finance, advertising and selling. In 1913 he entered the Baltimore & Ohio traffic department, specializing in research work designed to stimulate traffic in connection with the reorganization of the road's industrial department. In 1919 he formed an industrial bureau for the Baltimore (Md.) board of trade, which he directed until 1923, when he became executive assistant to the president of the Canton Railroad in that city. Mr. Smith was appointed director of the industrial bureau of the Industrial Club of St. Louis in 1927 and in 1931 he was appointed general traffic manager of the M-K-T, with headquarters at St. Louis. In August, 1933, he was promoted to the position he held at the time of his resignation.

FINANCIAL, LEGAL AND ACCOUNTING

Burton Fosler has been appointed auditor of passenger traffic of the Baltimore & Ohio with headquarters at Baltimore, Md. Mr. Fosler succeeds the late **Louis M. Grice,** whose death was reported in the *Railway Age* of October 30.

John C. Peterson, special accountant of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), with headquarters at Minneapolis, Minn., has been promoted to assistant comptroller of that road, and of the Duluth, South Shore & Atlantic, with the same headquarters, succeeding **J. R. Chapman,** whose promotion to general auditor was reported in the *Railway Age* of November 6. **A. T. Haugen,** chief clerk of the capital expenditure section of the accounting department, has been advanced to assistant auditor of disbursements of both roads, with headquarters as before at Minneapolis, and **M. J. Tracy,** chief clerk of the comptroller at Minneapolis, has been promoted to general accountant, with the same headquarters.

Mr. Peterson was born at Winnipeg, Man., on February 27, 1908, and graduated from the University of Minnesota in 1930. He entered railroad service in 1926, while attending school, as a clerk of the payroll department of the Soo, and upon graduating from college was appointed an accountant, with headquarters at Minneapolis. On October 1, 1939, Mr. Peterson was appointed general bookkeeper, and on April 1, 1940, he was advanced to special accountant assigned to the executive department at Minneapolis, holding that position until his new appointment, effective November 1.

Charles Louis Dautrich, whose appointment at general freight claim agent of the Southern with headquarters at Chattanooga, Tenn., was announced in the *Railway Age* of November 20, was born at Louisville, Ky., on March 20, 1894. On March 9, 1910, he entered railroad service with the Southern at Louisville, serving successively at that location as clerk and stenographer in the freight station and special service department; secretary to the superintendent; stenographer-clerk to the division freight claim agent; and as stock claim agent. In 1917 he became chief clerk

Charles Louis Dautrich

to terminal superintendent at East St. Louis, Ill., and in 1918 he was appointed stock claim agent at Louisville. In 1920 Mr. Dautrich became claim agent at Princeton, Ind., and in October of the same year he was appointed freight claim adjustor at Princeton. He was transferred to Louisville in June, 1932, becoming accountant-clerk in the roadmaster's office. He was appointed freight claim adjustor at Alexandria and Danville, Va., in 1933, and in March, 1936, was promoted to the position of assistant general freight claim agent at Chattanooga. He continued in that position until his recent appointment as general freight claim agent with the same headquarters.

OPERATING

W. R. Galloway, Jr., superintendent of the Eastern division of the Alton, with headquarters at Bloomington, Ill., has resigned to become superintendent of the Baltimore & Ohio Chicago Terminal, with headquarters at Chicago, succeeding **L. E. Thornton,** who has been granted a leave of absence to serve as a lieutenant-colonel of the 741st Railway Battalion, U. S. Army.

Dale E. Walker has been appointed trainmaster of all subdivisions of the Omaha-Northern Kansas divisions of the Missouri Pacific, with headquarters at Atchison, Kan.

R. J. Yost, trainmaster of the Atchison, Topeka & Santa Fe, with headquarters at Chillicothe, Ill., has been promoted to superintendent of the Missouri division, with headquarters at Marceline, Mo., succeeding **O. D. Crill,** who has been granted a leave of absence to enter military service.

C. T. Herzog, transportation inspector of the Atchison, Topeka & Santa Fe, with headquarters at Marceline, Mo., has been promoted to general transportation inspector, Western district, with headquarters at Topeka, Kan., succeeding **E. J. Bruce,** who has been granted a leave of absence to enter military service.

J. J. Rogers, assistant superintendent of the Southern district of the Pacific Fruit Express, with headquarters at Houston, Tex., has been promoted to superintendent of the Southern district, with the same headquarters, succeeding **Lewis J. Fredley** whose death was reported in the *Railway Age* of November 6.

B. V. Bodie, trainmaster of the Alton, has been promoted to superintendent, Eastern division, with headquarters as before at Bloomington, Ill., succeeding **W. R. Galloway, Jr.,** whose appointment as superintendent of the Baltimore & Ohio Chicago Terminal is reported elsewhere in these columns.

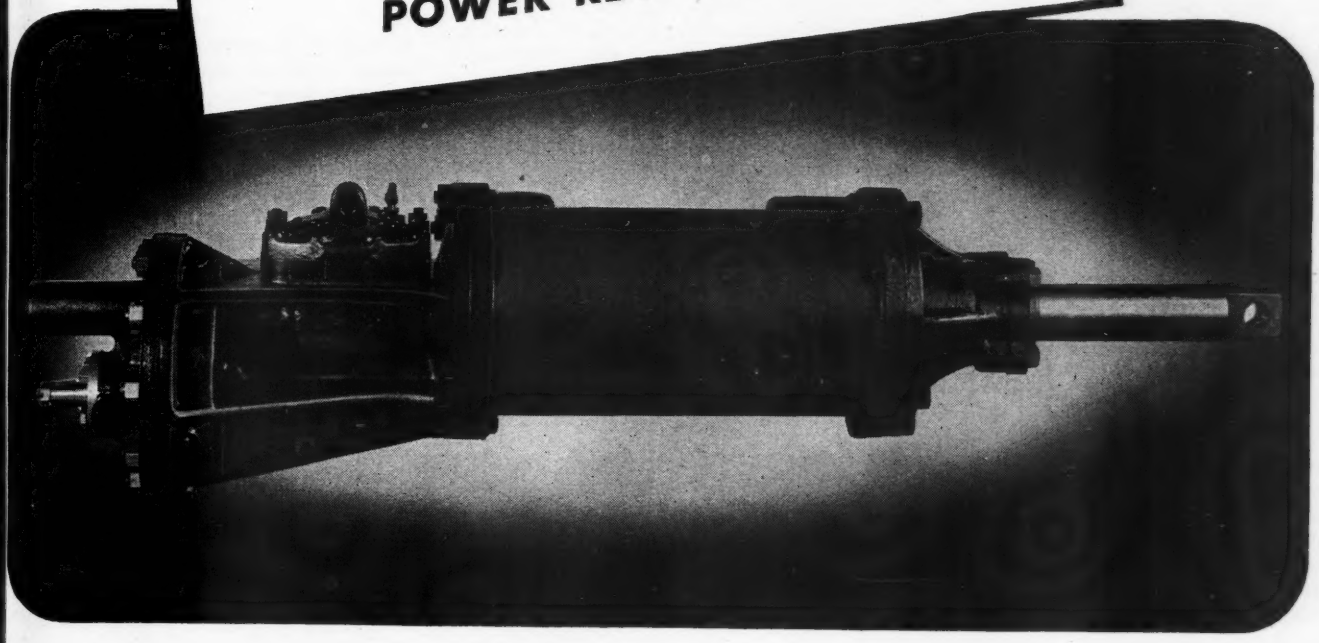
C. A. Johnston, superintendent of the Decatur division of the Wabash, with headquarters at Decatur, Ill., has been promoted to superintendent of transportation, with headquarters at St. Louis, Mo., succeeding **William N. Garvin,** whose death on November 29 was reported in the *Railway Age* of December 4. **J. F. Nellis,** division engineer of the Decatur division, has been advanced to superintendent of the St. Louis Terminal division, with headquarters at St. Louis, Mo., replacing **D. E. Leonard,** who has been transferred to the Decatur division, relieving Mr. Johnston.

Thomas M. Spence, superintendent of the Dallas and Austin divisions of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Ennis, Tex., and at Austin, Tex., has been promoted to general manager, with headquarters at Houston, Tex., succeeding **Andrew D. Mims,** whose death on October 30 was reported in the *Railway Age* of November 13. **J. J. Moore,** division superintendent, with headquarters at Houston, Tex., has been advanced to assistant general manager, with the same headquarters, succeeding **Blaine S. Hollimon,** whose death on November 3 was also reported in the *Railway Age* of November 13. **H. L. Bell,** assistant division superintendent with headquarters at Victoria, Tex., has been promoted to division superintendent, with headquarters at Ennis, replacing Mr. Spence, and **T. S. Stewart,** supervisor of wages, has been advanced to division superintendent, with headquarters as before at Houston, relieving Mr. Moore.

Bert J. Simmons, engineer maintenance of way and structures of the Western Pacific, with headquarters at San Francisco, Calif., has been promoted to assistant to the general manager, with the same headquarters. Mr. Simmons was born at Chicago on February 18, 1886. He entered railway service in February, 1904, in the engineering department of the Chicago & North Western at Chicago, becoming an instrumentman on the track elevation project of the Chicago Junction a year later. In November, 1906, Mr. Simmons entered the service of the Chicago, Indiana & Southern (now a part of the New York Central) as an instrumentman on construction, where

News Department continued on next left-hand page

GET MAXIMUM WORK FROM EVERY POUND OF STEAM — USE THE FRANKLIN PRECISION POWER REVERSE GEAR



The micrometer accuracy with which the desired cut-off may be obtained and maintained, makes the Franklin Precision Power Reverse Gear particularly valuable under today's difficult operating conditions.

Because cut-off adjustment is made easy, the engineman is encouraged to keep the cut-off adjustment fitted to every change in operating conditions. This helps materially to save fuel. It also does away with much unnecessary hard physical labor, and lets the engineman devote his uninterrupted attention to the efficient operation of his locomotive.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

he remained until April, 1907, when he became a rodman on maintenance of way on the Tennessee division of the Illinois Central. From October, 1908, to February, 1910, he was successively a topographer, estimator and levelman on preliminary and location surveys on construction on the Chicago, Rock Island & Pacific and on the St. Louis-San Francisco in Texas. From May, 1910, to the entry of the United States in the World War, Mr. Simmons was in turn transitman, assistant engineer, locating engineer and division engineer on location, construction and maintenance on the Coast Lines of the Atchison, Topeka & Santa Fe. He entered military service in June, 1917, as a captain and was later promoted to major, in the 18th Engineers, acting as project engineer and camp commander at Sulpice, France, and as superintendent of roads of Base Section No. 2. Mr. Simmons was discharged from the Army in May, 1919, and was soon after appointed division engineer on the Northwestern Pacific, later being advanced to engineer of maintenance of way and structures. In January, 1924, he was appointed assistant engineer on the Western Pacific, at San Francisco, and on June 1, 1927, he was promoted to the position he held at the time of his new appointment, which becomes effective on January 1, 1944.

John Longanecker Webb, whose appointment as manager of stations and motor service of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of December 4, was born at Scottdale, Pa., on March 17, 1890. He attended Peterson Business College at Scottdale, and entered railroad service on April 15, 1908, as a ticket clerk of the Pennsylvania at that town. He was transferred and filled various positions in the freight station, becoming chief clerk. In August, 1913, Mr. Webb was appointed chief clerk to the supervising agent, Pittsburgh division, serving in that capacity until March, 1918, when he became station and transfer clerk in the general superintendent's office at Pittsburgh, Pa. In December of the same year he was named assistant supervising agent, Philadelphia terminal division, and in March, 1920, he became supervising agent of the Manhatton division with headquarters at New York. The next year when the New York and Manhattan divisions were consolidated, Mr. Webb was supervising agent of the New York division, at Jersey City, N. J. In April, 1922, he was advanced to supervising agent of the same division, and in December, 1926, he was appointed ticket agent at Pennsylvania station, New York. From June, 1927, to February, 1939, he served successively in the Central and Eastern regions as superintendent of stations and transfers. On February 1, 1939, he was appointed acting general superintendent of stations and transfers with headquarters at Philadelphia. The following June he became general superintendent of stations and transfers. He continued in this position until his recent appointment as manager of stations and motor service, effective December 1.

John Longanecker Webb

TRAFFIC

T. K. Lynch has been named general passenger agent of the Atlantic Coast Line, with headquarters at Wilmington, N. C.

Harry A. Gebelein has been appointed general agent of the Duluth, South Shore & Atlantic, with headquarters at New York, succeeding **L. B. Kelz,** who has resigned.

H. E. Gustofson, general agent of the Ft. Dodge, Des Moines & Southern, with headquarters at DesMoines, Iowa, who has been on leave of absence, has returned to duty.

I. M. Kiley has been appointed district freight agent of the Canadian Pacific and of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), with headquarters at Grand Rapids, Mich.

J. F. Bahl, assistant general passenger agent, Lines West, of the Chicago, Milwaukee, St. Paul & Pacific, has been promoted to general passenger agent, with headquarters as before at Seattle, Wash. The position of assistant general passenger agent has been abolished.

W. J. Kelly, chief clerk of the freight traffic manager of the Grand Trunk Western, with headquarters at Chicago, has been promoted to general agent, with headquarters at St. Louis, Mo., succeeding **G. O. Thoresen,** whose promotion to assistant general freight agent at Detroit, Mich., was reported in the *Railway Age* of September 25.

John Taylor Whiteford, assistant to the manager of the passenger service bureau, Canadian National, has been appointed manager of the bureau with headquarters at Montreal, Que., succeeding **Russel Lynn Fairbairn,** whose death was reported in the *Railway Age* of September 11. **J. S. McDonald,** general agent at Montreal, has been appointed assistant to manager, passenger service bureau. Mr. Whiteford, a native of Paisley, Scotland, came to Canada at an early age. In April, 1913, he entered the transportation industry as a junior clerk with Canadian Northern Steamships. In January, 1915, he transferred to the passenger department of the Canadian Northern (now Canadian National), advancing through various positions requiring a knowledge of tickets and rates. In March, 1933, Mr. Whiteford became chief clerk in the office of the general passenger agent at Toronto, Ont. He was appointed assistant to the manager of the passenger service bureau at Montreal in April of this year, and retained that position until his recent appointment as manager of the bureau.

A. J. Stilling, whose promotion to assistant general freight traffic manager of the Union Pacific with headquarters at Omaha, Neb., was reported in the *Railway Age* of December 4, was born at Omaha on May 21, 1900, and entered railway service in 1917 in the rate and tariff bureaus of the Union Pacific at Omaha, holding various clerical positions until 1929 when he was advanced to chief clerk of the assistant freight traffic manager, with the same headquarters. On January 1, 1936, Mr. Stilling was promoted to chief rate clerk, and on June 1, 1937, he was advanced to assistant office manager at Omaha. On July 16, 1941, he was promoted to assistant to the general freight traffic manager, holding that position until his new appointment, effective November 16.

James Cameron, assistant freight traffic manager of the Grand Trunk Western, with headquarters at Chicago, has retired after 51 years service. Mr. Cameron was born in Perthshire, Scotland, and in September, 1891, became a messenger in the transportation department of the Grand Trunk at Hamilton, Ont. In the next year he was transferred to the freight traffic department, and later to Niagara Falls, N. Y., Black Rock, and Montreal, Que., and to Chicago in February, 1908. Various promotions followed, including appointment as chief of the tariff bureau and in November, 1927, he was advanced to general freight agent, with headquarters at Chicago. In July, 1941, Mr. Cameron was promoted to the position he held at the time of his retirement, effective December 1.

ENGINEERING & SIGNALING

C. A. Combs, general supervisor of bridges and buildings of the Western Pacific, with headquarters at Oakland, Calif., has been promoted to engineer maintenance of way and structures, with headquarters at San Francisco, Calif., succeeding **Bert J. Simmons,** whose promotion to assistant to the general manager is reported elsewhere in these columns. The position of general supervisor of bridges and buildings has been abolished and the duties of that position will be assumed by the engineer maintenance of way and structures.

MECHANICAL

John W. Chapman, assistant master mechanic of the Northern district of the Missouri-Kansas-Texas, with headquarters at Parsons, Kan., has been promoted to general master mechanic with jurisdiction over the Texas lines, the Northwestern district and the Beaver, Neabe & Englewood (part of the M-K-T), with headquarters at Denison, Tex., succeeding **A. B. Shanks,** who has retired.

F. R. Butler, general foreman of the Chesapeake & Ohio at Lexington, Ky., has

News Department continued on next left-hand page

Machine Forging Provides *Compactness and Strength*

In the manufacture of superheater units, machine forging is used exclusively in the fabrication of new Elesco units and the remanufacture of old units.

It is the result of years of progressive superheater improvement —*keep abreast of superheater development with Elesco.*

ELESCO

A-1622

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Blvd., CHICAGO
• • •
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

been appointed master mechanic of the Ashland division, Ashland, Ky., replacing **M. T. Llewellyn,** who has been transferred to the Hinton division at Hinton, W. Va. Mr. Llewellyn succeeds **F. J. Topping,** who has moved to the Hocking division with headquarters at Columbus, Ohio.

Wilfred Charles Bowra, assistant superintendent of motive power and car equipment of the Montreal district of the Canadian National with headquarters at Montreal, Que., has been appointed superintendent of motive power and car equipment of that district with the same headquarters. He succeeds **John Hillyard McAlpine,** who has retired from the position under pension regulations after more than forty years of railroad service. Mr. Bowra was born and educated at Stratford, Ont., where he began his railroad career as a machinist apprentice in the motive power shops of the Canadian National. During his apprenticeship he completed courses in mechanical drawing and mathematics at Stratford Collegiate Institute. After working as an apprentice, he was appointed inspector of motive power and car equipment at Toronto, Ont., in September, 1937, and assistant test engineer the following year. In October, 1939, Mr. Bowra became locomotive and car foreman at Cochrane, Ont., later serving as locomotive foreman at Mimico, Ont., and Turcot Roundhouse, Montreal. Last May he was appointed Mr. AcAlpine's assistant, and he continued in that capacity until his recent appointment as superintendent of motive power and car equipment with headquarters at Montreal.

Wilfred Charles Bowra

Mr. McAlpine was born at Komoka, Ont., on November 26, 1876, and entered railroad service in February, 1903, at Winnipeg, Man. as foreman boilermaker of the Canadian Northern (now Canadian National). In October, 1903, he became boiler inspector at Winnipeg, and in June, 1907, he was appointed locomotive foreman at Saskatoon, Sask. Other positions in which Mr. McAlpine served on the Canadian Northern included that of locomotive foreman at Fort Rouge, Man., and master mechanic at Parry Sound, Ont., and Toronto. In March, 1923, he became superintendent in the mechanical department of the Canadian National at Toronto, being appointed superintendent of motive power and car equipment at North Bay, Ont., in September, 1925. In April, 1930, he was appointed superintendent of motive power at Montreal, and in July, 1932, the duties of supervising car equipment maintenance work in the Montreal district were added to his responsibilities. This dual position he retained until his recent retirement.

PURCHASES AND STORES

G. D. Tombs, traveling storekeeper of the Illinois Central, has been promoted to assistant general storekeeper, with headquarters as before at Chicago, a newly-created position.

LeRoy Cooley, assistant general storekeeper of the Central of New Jersey with headquarters at Elizabethport, N. J., has been appointed general storekeeper at Reading, Pa., succeeding **W. H. Morris,** resigned.

SPECIAL

T. C. Montgomery, assistant general manager of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., has been promoted to manager of personnel, with the same headquarters, and **G. W. Kelly** has been appointed assistant manager of personnel with headquarters at Houston.

OBITUARY

Charles Miller Sheaffer, who retired in 1928 as assistant vice-president in charge of operation of the Pennsylvania, died on December 3 at Bryn Mawr, Pa. He was 85 years old.

William K. McFarlin, railway construction engineer who at one time was chief engineer of the Delaware, Lackawanna & Western, died December 6 at East Orange, N. J. He was 83 years old.

William E. Rawson, division storekeeper of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Victoria, Tex., died in that city on October 9.

William Walliser, who retired in 1934 as vice-president in charge of personnel of the Chicago & North Western, with headquarters at Chicago, died at his home in West Chicago, on December 2 at the age of 77. Mr. Walliser was born on July 27, 1866, at West Chicago, and entered railway service in May, 1883, as an engine caretaker, being promoted to locomotive fireman in November of the same year. Two years later he became a freight brakeman and in 1892 he was advanced to freight conductor. After ten years in the latter position, he was further advanced to trainmaster on the Galena division and in November, 1903, he was appointed assistant division superintendent. In March, 1909, Mr. Walliser was promoted to superintendent of the Minnesota division, being transferred to the East Iowa division in May, 1911. Three years later he was promoted to assistant to the general manager with headquarters at Chicago, continuing in this position until November, 1918, when he became assistant general manager with the same headquarters. In 1924 he was advanced to the position he held at the time of his retirement.

Warren S. Andrews, who retired in 1938 as assistant vice-president in charge of operations of the Southern, with headquarters at Washington, D. C., died in a hospital at St. Cloud, Minn., on November 26, after an illness of several weeks. Mr. Andrews was born at Salem, Ill., on November 24, 1865. He entered railroad service in 1883 as a telegraph operator and train dispatcher of the Ohio & Mississippi (now Baltimore & Ohio). In 1886 he became a train dispatcher of the Great Northern at St. Cloud, then serving at train dispatcher and trainmaster on the Chicago division of the Illinois Central from 1893 to 1902. In the latter year Mr. Andrews went with the Southern, serving subsequently as trainmaster, superintendent on various divisions, and general superintendent of transportation at Cincinnati, Ohio. In 1920 he was promoted to the position he held at the time of his retirement.

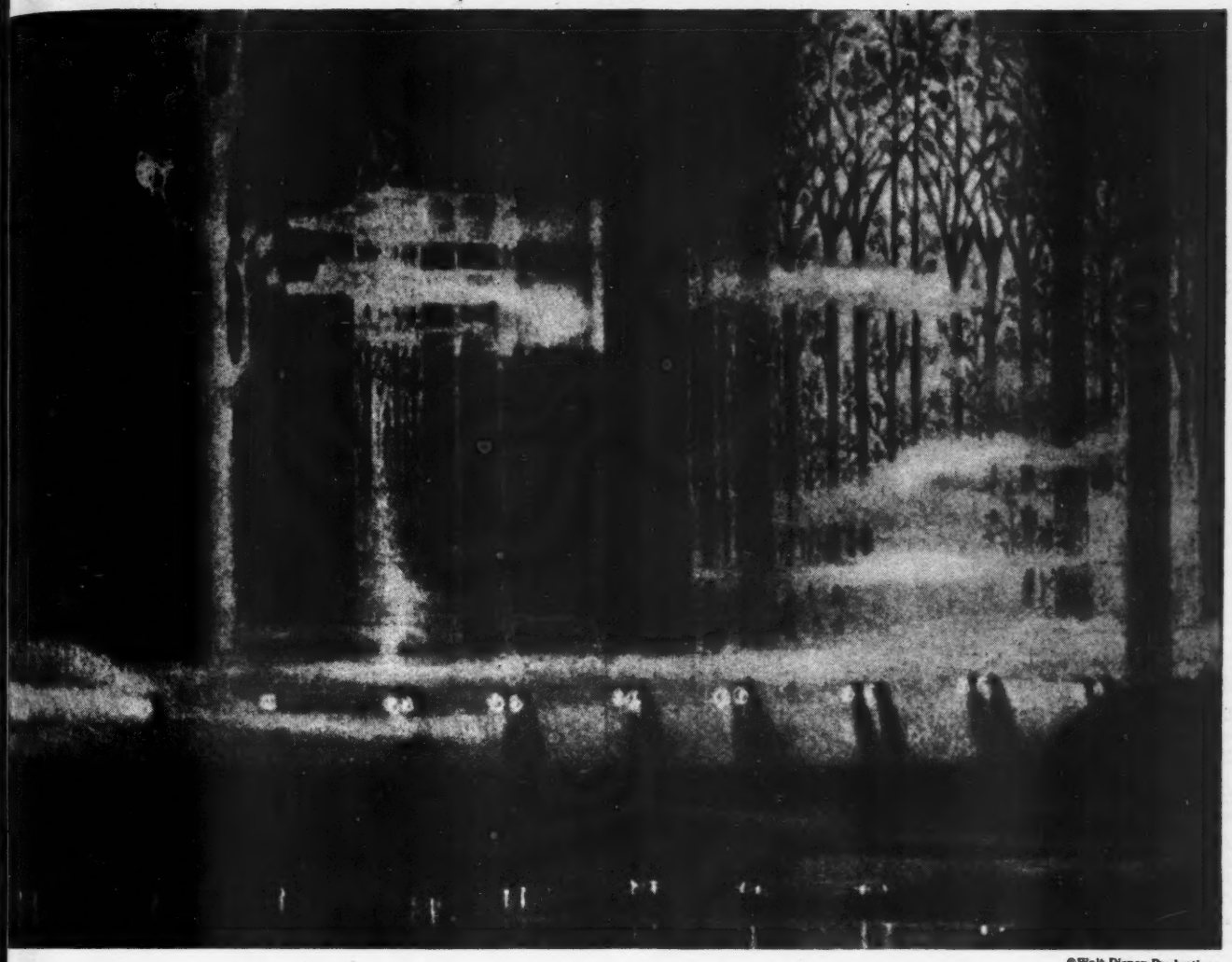
William N. Garvin, superintendent of transportation of the Wabash, with headquarters at St. Louis, Mo., whose death on November 29 was reported in the *Railway Age* of December 4, was born at Lewiston, Idaho, on September 6, 1894, and entered railway service in 1912 with the Camas Prairie (now jointly operated by the Union Pacific and the Northern Pacific), at Lewiston. During World War I he served in the U. S. Navy and in 1919 he went with the Boston & Maine at Boston. During 1920 and 1921 Mr. Garvin served with the United States Railroad Administration, with headquarters at Washington, D. C. In the latter year he was appointed analyst and chief of the statistical bureau of the Wabash, and a short time later he was promoted to superintendent of the St. Louis Terminal division. In 1934 Mr. Garvin was advanced to the position he held at the time of his death.

THE 14-MILE SHADA RAILWAY in Haiti is contributing to the war effort by aiding the development of sisal for the United Nations war industry, a recent release from the Office of the Coordinator of Inter-American Affairs discloses. The line runs through the heart of a large sisal plantation in northern Haiti.

Shada is the popular name for the Societe Haitiano-Americaine de Developpement Agricole, a Haitian organization supported by United States technical aid and credits. The railroad was acquired from the Haitian National Railway which once ran the line from Cap-Haitien to Bahon. The Shada Railway operates both as a common carrier and a private road, hauling about 4,000 passengers a month, and miscellaneous freight.

According to Jack Berliant, head of the sisal operations and operating chief of the railway, rolling stock consists of one baggage car and two passenger coaches, numbered 501, 502 and 503, "to make them look more important."

Table of Revenues and Expenses appears on next left-hand page



©Walt Disney Productions

What's the word you think most of at Christmas?

THERE'S one word men of good will everywhere associate with Christmas.

That word is *"Peace, Peace on earth"*...

There can be no peace this Christmas. Not one of us would want the only kind of peace there could be, an inconclusive peace.

But we do want the right kind of peace as soon as possible. And this Christmas we can help hasten the coming of that wonderful day, by making War Bonds our chief gift.

Every Bond you buy brightens the chances of a better world than man has ever known.

How, then, could you possibly give a better present than Bonds, Bonds, Bonds? Give them to each member of the family. Give them to your friends. Give them to *everybody—the greatest gift of all!*

Give War Bonds for Christmas

Alco

AMERICAN LOCOMOTIVE COMPANY

This advertisement prepared under the auspices of the U. S. Treasury Department and the War Advertising Council.

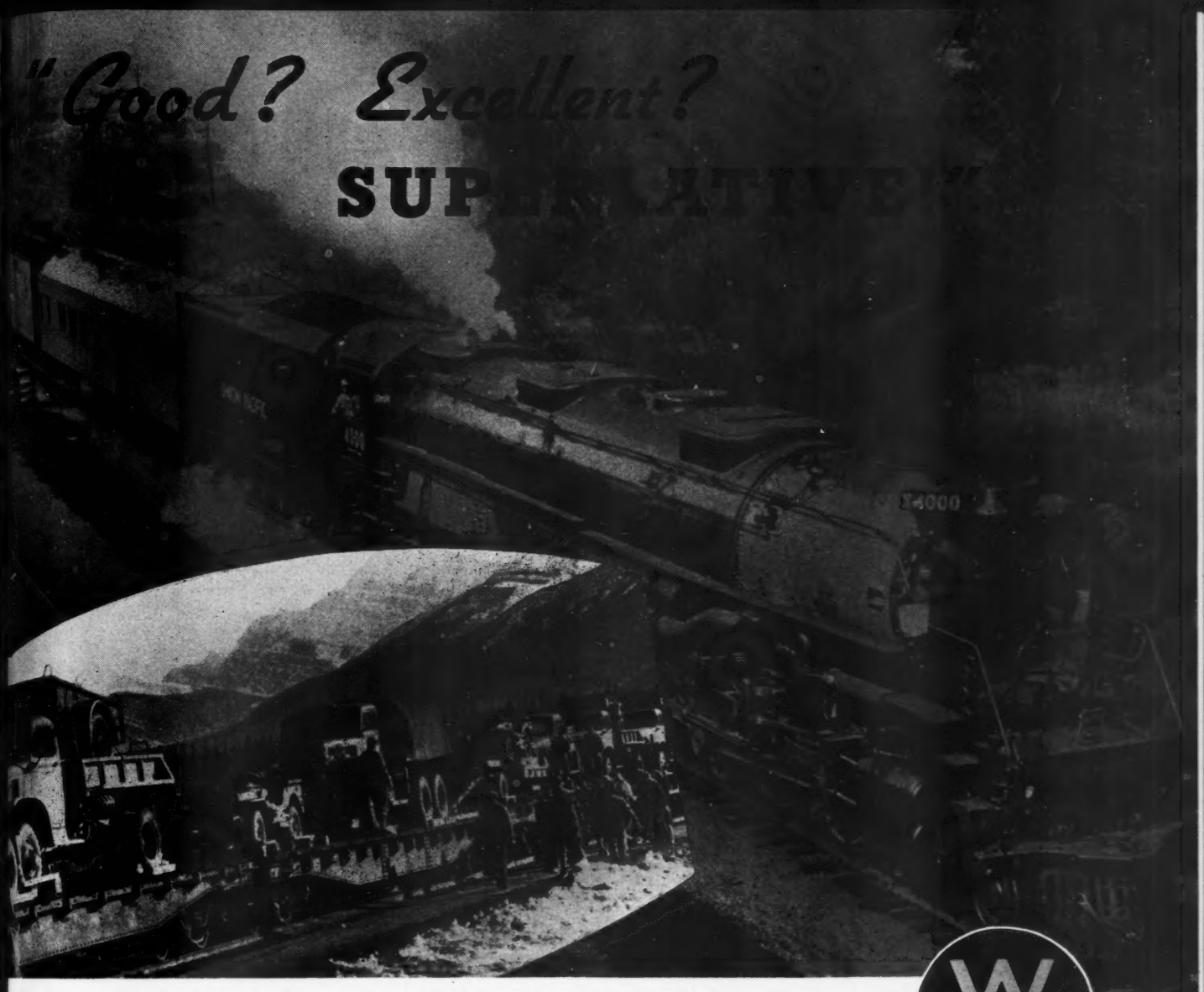
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF OCTOBER AND TEN MONTHS OF CALENDAR YEAR 1943

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1943	1942
Akron, Canton & Youngstown	Oct.	171	$402,170	$152	$416,307	$75,030	$42,409	$18,043	$114,936	$266,038	63.9	$150,269	$97,292	$83,618	$68,383
	10 mos.	171	3,574,028	1,559	3,728,665	555,705	332,046	171,442	981,060	2,179,876	58.5	1,548,789	1,009,359	852,827	509,677
Alton	Oct.	959	1,927,679	808,844	3,050,083	345,761	451,907	73,975	988,878	1,978,237	64.9	1,071,846	447,363	199,470	624,586
	10 mos.	959	20,787,846	7,067,699	30,922,073	3,355,686	4,099,418	578,830	9,063,999	18,289,758	59.1	12,632,315	5,616,194	3,309,014	3,869,828
Atchison, Topeka & Santa Fe System	Oct.	13,148	29,627,372	9,376,033	42,055,848	5,891,532	7,517,648	774,379	11,814,818	26,952,738	64.1	15,103,110	7,088,808	6,793,839	11,315,723
	10 mos.	13,152	273,053,655	85,442,245	384,918,247	41,993,468	58,253,711	5,510,430	98,727,279	210,169,404	54.6	174,748,843	55,822,435	52,152,870	64,522,435
Atlanta & West Point	Oct.	93	244,410	139,184	420,279	45,074	44,549	10,082	166,032	282,985	67.3	137,294	59,767	31,393	105,913
	10 mos.	93	2,614,461	1,360,013	4,352,584	414,192	425,439	93,862	1,355,546	2,450,885	56.3	1,901,699	691,644	402,211	546,940
Western of Alabama	Oct.	133	277,290	147,850	454,945	62,369	50,597	11,244	149,545	289,962	63.7	164,983	57,672	51,229	150,947
	10 mos.	133	2,669,912	1,416,142	4,427,141	456,815	489,228	101,501	1,307,091	2,504,138	56.6	1,923,003	665,307	561,883	761,145
Atlanta, Birmingham & Coast	Oct.	639	469,207	49,043	565,216	106,678	109,412	26,354	267,446	547,911	96.9	17,305	—11,431	—36,004	93,836
	10 mos.	639	5,202,772	547,026	6,022,295	763,057	800,514	258,157	2,168,303	4,203,161	69.8	1,819,134	897,101	543,384	409,658
Atlantic Coast Line	Oct.	4,956	7,320,603	3,291,153	11,478,160	1,017,639	1,868,957	184,959	3,367,955	6,834,586	59.5	4,643,574	643,574	405,862	1,923,850
	10 mos.	4,967	85,844,913	35,014,348	127,944,500	10,114,255	16,470,419	1,823,209	34,082,586	66,173,712	51.7	61,770,788	17,520,788	13,254,685	17,015,217
Charleston & Western Carolina	Oct.	343	295,814	11,947	314,449	47,247	58,897	10,837	102,516	224,862	71.5	89,587	24,587	29,139	84,131
	10 mos.	343	3,427,906	123,212	3,619,656	426,709	520,562	105,733	1,126,170	2,235,836	61.8	1,383,820	633,820	637,371	730,976
Baltimore & Ohio*	Oct.	6,146	26,365,127	3,460,626	31,432,541	4,161,462	6,021,410	470,354	9,807,273	21,444,033	68.2	9,988,508	5,473,549	4,651,839	6,444,941
	10 mos.	6,149	250,695,203	32,553,515	298,807,216	35,214,393	55,777,636	4,631,346	91,921,242	196,956,551	65.9	101,850,665	63,365,383	56,189,527	48,834,937
Staten Island Rapid Transit	Oct.	24	278,223	105,187	392,096	38,439	25,894	1,322	103,781	190,790	48.7	201,306	155,885	145,567	95,259
	10 mos.	24	2,267,348	1,182,513	3,538,548	364,971	288,253	11,789	1,025,822	1,890,168	53.4	1,648,380	1,206,649	1,053,725	289,392
Bangor & Aroostook	Oct.	602	941,768	84,961	1,057,460	95,133	113,301	6,379	228,224	475,070	44.9	582,390	329,322	333,789	133,917
	10 mos.	602	5,620,401	812,021	6,734,197	1,206,234	1,059,814	58,951	1,724,891	4,367,384	64.8	2,366,813	1,180,126	1,423,757	1,088,458
Bessemer & Lake Erie	Oct.	214	2,138,829	1,662	2,156,284	144,458	705,283	12,570	354,815	1,271,890	59.0	884,394	268,217	378,772	633,165
	10 mos.	214	16,764,675	19,380	16,911,590	1,500,613	7,498,990	130,260	3,053,035	12,575,592	74.4	4,335,998	686,868	2,092,470	3,323,881
Boston & Maine	Oct.	1,820	5,225,367	1,517,504	7,384,154	1,218,630	1,219,147	89,574	2,754,114	5,527,654	74.9	1,856,500	1,100,966	874,440	1,625,964
	10 mos.	1,822	49,982,980	16,206,829	72,549,226	11,008,094	10,956,261	810,979	25,289,489	50,325,641	69.4	22,223,585	13,160,634	10,511,847	11,823,018
Burlington, Rock Island	Oct.	228	116,831	56,321	187,158	24,303	19,203	2,882	53,757	113,521	60.7	73,637	65,292	50,634	14,131
	10 mos.	228	1,545,196	657,737	2,345,819	267,068	204,334	27,171	838,664	1,470,977	62.7	874,842	765,824	518,631	123,934
Cambria & Indiana	Oct.	35	157,572	.....	157,670	15,606	55,480	501	16,710	95,444	60.53	62,226	6,121	86,430	43,814
	10 mos.	35	1,562,077	.....	1,562,762	147,666	684,623	4,940	178,756	1,081,860	69.23	480,902	—261,334	477,112	656,039
Canadian Pacific Lines in Maine	Oct.	234	434,782	58,182	524,237	61,802	77,700	6,265	154,575	311,443	59.4	212,794	191,850	165,350	191,115
	10 mos.	234	4,462,530	673,700	5,389,605	568,904	701,702	62,125	1,538,092	2,965,059	55.0	2,424,546	2,219,244	1,904,517	1,331,506
Canadian Pacific Lines in Vermont	Oct.	90	65,032	10,627	89,226	32,633	33,620	2,271	85,876	158,862	178.0	—69,636	—79,485	—109,504	—61,957
	10 mos.	90	835,078	140,477	1,115,822	315,997	283,375	22,547	875,077	1,540,341	138.0	—424,519	—512,446	—801,321	—522,061
Central of Georgia	Oct.	1,815	2,163,954	773,344	3,215,205	353,289	426,306	68,058	1,006,988	1,998,051	62.1	1,217,154	584,276	564,395	1,033,367
	10 mos.	1,815	22,158,871	6,546,022	31,232,587	3,288,850	4,116,420	678,430	9,727,723	19,068,602	61.1	12,163,985	7,772,058	7,408,336	5,923,425
Central of New Jersey	Oct.	657	4,335,356	630,027	5,296,394	594,926	981,992	52,649	2,206,635	3,979,836	75.1	1,316,558	590,471	293,645	1,039,711
	10 mos.	657	43,585,120	6,819,673	53,378,327	6,011,825	8,944,427	508,961	21,316,322	38,129,060	71.4	15,249,267	7,983,987	5,301,894	7,479,458
Central Vermont	Oct.	422	669,132	93,000	820,931	126,991	99,868	10,539	353,264	614,333	74.8	206,598	157,216	109,008	113,178
	10 mos.	422	6,271,602	892,000	7,685,321	1,133,794	1,104,385	103,743	3,042,662	5,637,918	73.4	2,047,403	1,609,956	1,168,171	1,162,431
Chesapeake & Ohio	Oct.	3,085	15,924,151	2,118,493	18,844,755	1,939,551	2,814,222	203,362	4,736,174	10,266,647	54.5	8,578,108	2,949,943	3,227,858	7,065,838
	10 mos.	3,088	149,427,437	17,784,935	173,571,211	16,913,175	27,979,516	2,114,564	39,236,967	91,203,403	52.6	82,367,808	27,665,818	31,394,307	30,388,688
Chicago & Eastern Illinois	Oct.	912	1,968,924	555,808	2,818,171	350,990	383,550	58,856	1,033,856	1,922,367	68.2	895,804	455,804	211,924	634,016
	10 mos.	912	19,247,107	5,360,254	26,837,631	2,867,404	3,736,305	601,811	8,498,312	16,641,666	62.0	10,195,965	5,811,965	3,313,239	2,954,554
Chicago & Illinois Midland	Oct.	131	490,886	1,833	520,475	57,018	76,599	20,132	125,856	304,950	58.6	215,525	79,187	84,651	93,109
	10 mos.	131	4,998,285	13,343	5,270,338	624,022	763,216	208,412	1,217,452	3,059,856	58.1	2,210,482	772,602	829,519	810,259
Chicago & North Western	Oct.	8,100	10,696,845	2,866,812	14,862,628	1,826,638	2,168,300	200,546	4,334,824	8,977,506	60.4	5,885,122	5,153,539	5,050,944	3,427,746
	10 mos.	8,100	96,447,874	27,590,846	136,517,886	16,492,141	21,150,445	1,975,271	40,516,872	84,459,996	61.9	52,057,890	33,404,516	32,748,252	20,740,086
Chicago, Burlington & Quincy	Oct.	9,024	15,513,279	3,190,237	20,519,433	2,784,160	2,248,467	296,538	4,994,459	10,922,302	53.2	9,597,131	2,885,419	2,606,582	4,515,073
	10 mos.	9,031	137,217,971	26,242,877	178,815,683	22,821,253	22,037,589	2,607,677	43,837,585	96,255,757	53.8	82,559,926	37,434,739	35,077,674	28,424,261
Chicago Great Western	Oct.	1,500	2,248,676	262,868	2,699,706	315,230	286,678	58,585	852,769	1,576,777	58.4	1,422,929	573,193	394,324	468,604
	10 mos.	1,500	21,001,083	2,337,971	25,041,268	3,123,114	2,844,049	608,466	8,024,529	15,236,701	60.8	9,804,567	4,998,220	3,208,337	2,618,438
Chicago, Indianapolis & Louisville	Oct.	541	977,040	107,672	1,171,160	102,715	177,686	29,403	320,416	668,398	57.1	502,762	377,708	345,178	366,797
	10 mos.	541	9,105,909	1,008,203	10,865,688	1,154,538	1,733,928	300,290	3,233,499	6,788,235	62.5	4,077,453	3,272,335	2,851,642	2,032,760

*The September Revenues and Expenses of Railways table, page 748, November 6 issue, in the [illegible]

Table continued on next left-hand page



So said an officer of the Army Transportation Corps when questioned regarding wartime performance of the railroads.*

The emergency found them ready with much improved equipment — more efficient, more reliable, more durable — that was being accumulated for better peacetime service. Wartime requirements of increasing magnitude have proved the wisdom of this foresight. Vital materials and supplies have been kept rolling at time-saving speeds, in huge volume, troops moving in vast numbers with dispatch, but — the "saturation point" of available facilities is imminent. Motive power and rolling stock are being taxed to their utmost. They must be augmented by new equipment, reinforced with adequate maintenance supplies.

Pending more liberal allotment of vital materiel′, for which we are amply prepared, our field personnel will be glad to give any desired help toward maintaining the performance of Air Brakes, so that the accelerated movement of volume traffic may continue to be properly safeguarded, and that the best possible results be realized from equipment now in service.

** As reported in Railway Age — June 26, 1943.*

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF OCTOBER AND TEN MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues			Operating expenses					Operating ratio	Net from railway operation	Operating income	Net railway operating income	
			Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total				1943	1942
Chicago, Milwaukee, St. Paul & Pacific	Oct.	10,740	$16,804,304	$2,864,984	$21,490,657	$2,740,487	$2,531,662	$252,811	$5,872,868	$12,024,728	56.0	$9,465,929	$5,649,929	$5,409,515	$4,224,980
	10 mos.	10,765	144,456,451	25,650,421	186,288,099	25,397,324	23,351,060	2,485,290	53,418,035	110,342,113	59.2	75,945,986	49,020,986	47,082,542	27,385,497
Chicago, Rock Island & Pacific	Oct.	7,751	9,751,159	3,265,374	14,174,323	1,853,114	2,084,653	312,679	4,026,120	8,812,821	62.2	5,361,502	2,755,833	2,404,774	4,814,467
	10 mos.	7,758	103,746,033	32,598,117	147,301,254	15,060,207	19,471,230	3,093,618	40,810,641	83,733,448	56.8	63,567,806	39,937,752	34,772,854	29,952,853
Chicago, St. Paul, Minn. & Omaha	Oct.	1,617	2,020,048	380,466	2,590,461	278,225	346,078	39,799	892,019	1,634,549	63.1	955,912	597,275	538,289	531,128
	10 mos.	1,623	17,784,958	3,358,612	22,713,581	2,929,462	3,292,468	391,987	8,367,154	15,736,673	69.3	6,976,908	4,871,236	4,229,375	2,615,828
Clinchfield Railroad	Oct.	302	965,045	10,908	984,016	117,755	180,092	21,547	205,009	550,260	55.9	433,756	300,488	325,233	503,033
	10 mos.	303	10,434,176	140,301	10,662,848	972,801	1,607,835	215,537	2,090,310	5,118,742	48.0	5,544,106	4,266,718	4,422,652	4,837,601
Colorado & Southern	Oct.	748	905,608	301,022	1,304,685	188,125	187,479	15,374	384,022	823,488	63.1	481,197	353,202	310,052	347,083
	10 mos.	748	7,885,830	2,734,220	11,554,995	1,484,625	1,724,551	154,063	3,299,062	7,129,151	61.7	4,425,844	2,924,333	2,665,572	2,070,700
Ft. Worth & Denver City	Oct.	804	962,593	502,362	1,568,353	126,434	124,763	23,118	369,624	704,256	44.9	864,097	511,641	449,121	560,314
	10 mos.	804	7,680,426	4,143,984	12,806,201	1,297,064	1,192,475	234,872	3,094,429	6,360,056	49.7	6,446,145	3,760,521	3,281,458	2,910,400
Colorado & Wyoming	Oct.	42	97,117	.....	148,594	18,341	11,912	803	53,160	88,782	59.7	59,812	22,940	22,435	22,886
	10 mos.	42	948,989	.....	1,470,550	166,515	135,938	8,906	555,140	913,645	62.1	556,905	224,217	218,595	230,590
Columbus & Greenville	Oct.	168	108,400	12,387	129,802	33,245	21,095	3,872	44,856	114,918	88.5	14,884	22,434	23,092	32,585
	10 mos.	168	1,012,037	80,694	1,174,821	262,169	196,323	37,954	415,893	1,037,055	88.3	137,766	32,880	48,466	92,012
Delaware & Hudson	Oct.	848	3,875,383	185,034	4,160,257	551,118	1,147,470	52,128	1,473,532	3,351,680	80.6	808,577	1,228,332	1,246,361	1,195,798
	10 mos.	848	37,754,119	1,831,026	40,632,901	4,339,260	9,470,549	448,102	12,817,120	28,147,012	69.3	12,485,889	8,383,385	8,345,984	7,789,333
Delaware, Lackawanna & Western	Oct.	973	5,321,648	885,083	6,838,173	1,006,249	1,258,956	150,033	3,803,195	6,470,390	94.6	367,783	—83,717	—189,670	1,177,584
	10 mos.	977	52,826,127	9,448,834	68,435,608	7,045,886	9,850,976	1,166,507	26,791,243	46,711,060	68.3	21,724,548	10,680,048	9,392,380	9,382,111
Denver & Rio Grande Western	Oct.	2,405	4,807,661	749,718	5,816,599	573,045	1,028,439	94,309	1,853,290	3,745,035	64.4	2,071,564	1,342,271	1,167,605	2,208,145
	10 mos.	2,405	48,129,439	8,035,599	58,653,893	4,796,699	9,472,992	916,070	16,230,869	33,123,208	56.5	25,530,685	16,134,892	14,682,625	14,340,565
Denver & Salt Lake	Oct.	232	112,971	1,789	123,139	56,888	52,407	2,529	61,335	178,903	145.3	—55,764	—83,682	—29,340	183,402
	10 mos.	232	2,181,593	78,272	2,377,101	422,452	511,449	26,250	767,449	1,830,790	77.0	546,311	196,800	638,541	941,726
Detroit & Mackinac	Oct.	242	68,166	9,880	87,932	17,508	15,555	885	28,235	65,846	74.8	22,086	17,764	15,931	97,033
	10 mos.	242	607,601	126,642	828,488	186,722	172,872	8,656	296,191	702,904	84.8	125,584	53,090	35,315	270,706
Detroit & Toledo Shore Line	Oct.	50	309,518	.....	310,733	39,123	25,881	9,526	92,123	175,457	56.5	135,276	74,293	29,563	78,623
	10 mos.	50	3,451,650	.....	3,465,235	345,357	245,157	92,052	905,966	1,670,190	48.2	1,795,045	1,140,093	630,552	668,731
Detroit, Toledo & Ironton	Oct.	464	695,134	1,390	745,483	104,015	122,563	13,451	190,142	453,279	60.8	292,204	187,449	195,214	216,445
	10 mos.	464	7,315,603	13,159	7,840,830	938,340	1,132,342	137,601	1,804,013	4,247,318	54.2	3,593,512	2,095,609	2,090,326	1,668,205
Duluth, Missabe & Iron Range	Oct.	543	4,949,044	3,827	5,754,120	472,575	518,967	4,015	918,963	1,953,024	33.9	3,801,096	1,439,624	1,447,139	1,570,112
	10 mos.	545	32,234,048	41,918	37,443,548	3,913,323	4,626,967	42,986	6,357,806	15,350,172	41.0	22,093,376	8,062,403	8,245,570	7,024,211
Duluth, Winnipeg & Pacific	Oct.	175	298,000	3,500	308,700	45,809	32,051	1,966	96,593	180,372	58.4	128,328	105,915	84,573	19,497
	10 mos.	175	2,187,000	37,000	2,274,600	400,324	291,665	19,326	859,623	1,607,947	70.7	666,653	493,018	270,991	123,211
Elgin, Joliet & Eastern	Oct.	392	2,548,849	.....	2,930,457	238,126	715,641	15,036	910,079	1,938,632	66.2	991,825	304,858	216,377	514,307
	10 mos.	392	23,447,879	219	27,283,923	2,038,442	7,649,643	159,465	9,171,802	19,599,211	71.8	7,684,712	2,650,689	1,680,967	2,744,020
Erie	Oct.	2,244	12,305,162	1,130,693	14,287,578	2,087,444	3,147,568	314,720	6,525,540	12,664,216	88.6	1,623,362	1,264,023	580,007	2,339,843
	10 mos.	2,243	115,308,601	9,341,982	132,391,964	12,304,659	21,597,886	2,164,825	44,497,583	84,539,388	63.9	47,852,576	21,590,602	15,912,696	20,379,351
Florida East Coast	Oct.	682	1,206,280	755,914	2,121,288	200,097	254,667	44,890	607,408	1,207,222	56.9	914,066	837,141	757,896	501,047
	10 mos.	682	14,320,243	11,322,725	27,354,773	2,547,010	2,373,924	447,539	6,660,630	13,153,265	48.1	14,201,508	9,568,853	8,472,088	5,564,341
Georgia Railroad	Oct.	329	709,209	156,460	906,426	98,104	129,654	24,163	340,639	615,225	67.9	291,201	260,603	222,889	373,009
	10 mos.	329	7,018,663	1,648,336	9,081,264	899,820	993,692	222,667	2,921,455	5,234,083	57.6	3,847,181	3,559,953	3,339,285	2,893,745
Georgia & Florida	Oct.	408	167,203	6,064	177,679	45,232	23,306	10,004	62,634	147,886	83.2	29,793	19,796	9,762	2,965
	10 mos.	408	1,591,192	55,135	1,697,596	406,995	214,940	99,225	536,176	1,322,556	77.9	375,040	280,835	204,864	106,923
Grand Trunk Western	Oct.	1,026	2,509,000	280,000	2,974,000	326,235	474,890	36,629	1,151,880	2,098,570	70.6	875,430	552,843	559,624	502,289
	10 mos.	1,026	24,366,000	2,964,000	29,107,000	4,012,950	4,623,540	359,915	10,686,791	20,702,617	71.1	8,404,383	5,681,124	5,435,345	4,522,678
Canadian National Lines in New England	Oct.	172	124,600	11,100	152,900	57,702	34,423	2,486	99,049	211,033	138.0	—58,133	—78,436	—108,654	—90,883
	10 mos.	172	1,118,700	98,500	1,443,500	521,288	312,047	24,760	899,121	1,956,299	135.5	—512,799	—715,829	—1,060,455	—733,957
Great Northern	Oct.	8,308	16,386,056	1,863,038	19,779,475	2,213,485	3,024,739	211,130	4,673,946	10,676,586	54.0	9,102,889	3,338,842	3,144,051	6,708,227
	10 mos.	8,183	136,213,903	14,735,975	163,851,415	23,089,881	28,322,801	2,614,312	39,564,130	98,008,629	59.8	65,842,786	26,126,911	25,423,290	31,829,813
Green Bay & Western	Oct.	234	258,324	629	267,060	84,643	23,570	8,345	63,562	186,601	69.8	80,459	33,743	25,169	21,473
	10 mos.	234	2,293,498	6,100	2,375,870	539,841	195,754	78,432	601,141	1,485,458	62.5	890,412	600,137	528,958	279,292
Gulf & Ship Island	Oct.	259	140,850	40,006	201,456	54,810	23,167	2,774	80,914	171,534	85.1	29,922	11,446	—2,146	64,128
	10 mos.	259	146,355	452,897	212,823	632,341	304,499	28,933	866,995	1,923,538	91.0	189,285	—6,849	—167,093	293,357

Table continued on next left-hand page

IT is not at all unusual for wear-resisting parts made from HUNT-SPILLER *Air Furnace* GUN IRON to stay with the locomotive through several classified repairs before renewals are necessary.

Performance records show unusual mileage between replacements—increased locomotive availability—economical fuel consumption and lower maintenance costs.

Complete installations of the H.S.G.I. parts listed below insure maximum economies and dependable locomotive performance.

HSGI
Reg. U. S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings

Finished Parts

Dunbar Sectional Type Packing
Duplex Sectional Type Packing for Cylinders and Valves
(Duplex Springs for Above Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes
Light Weight Valves
Cylinder Liners and Pistons for Diesel Service

HUNT SPILLER MFG. CORPORATION

V. W. Ellet, *President* **E. J. Fuller, *Vice-Pres. & Gen. Mgr.***

Office & Works

383 Dorchester Ave. **South Boston 27, Mass.**

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER GUN IRON

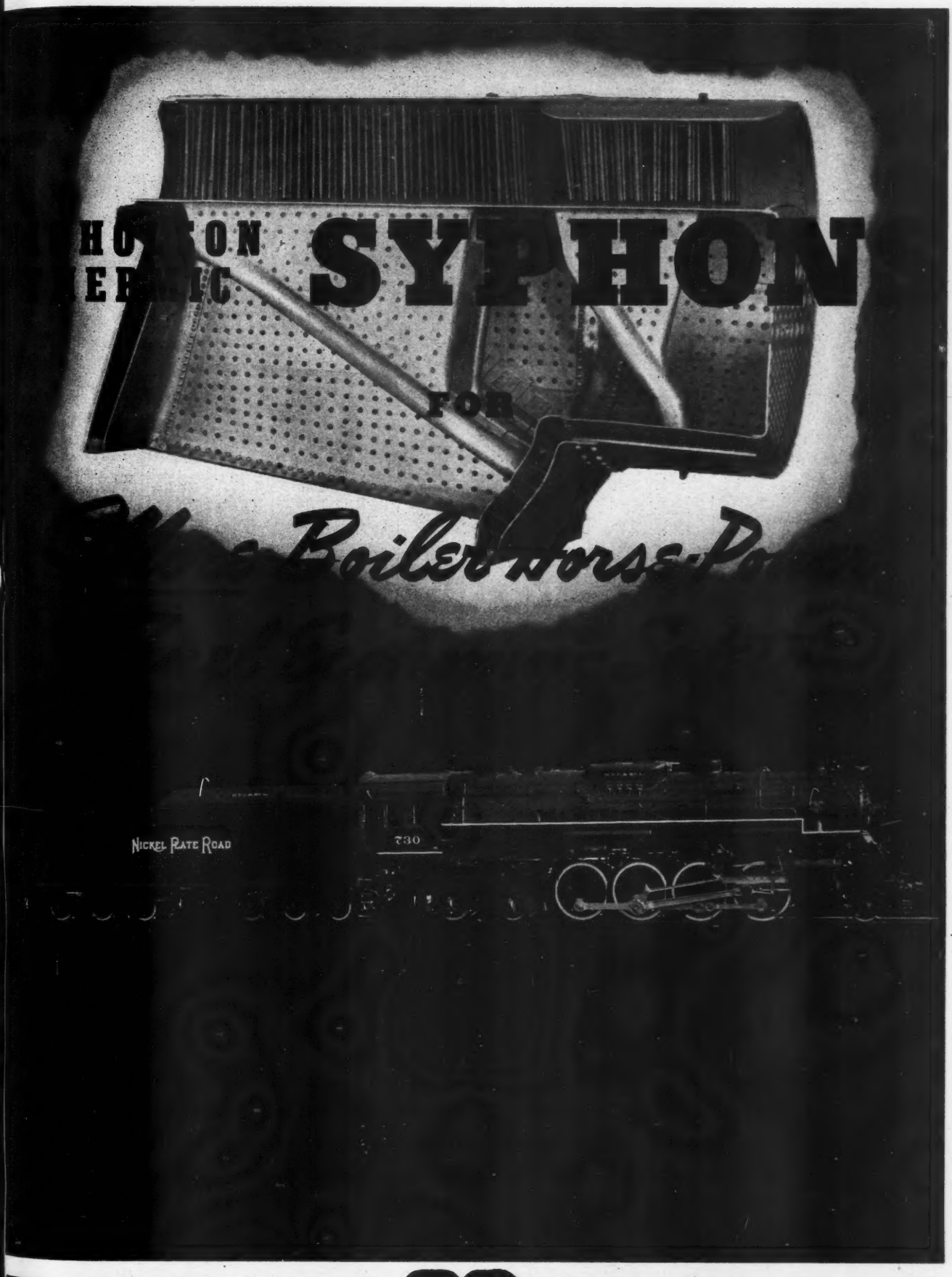
Air Furnace

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF OCTOBER AND TEN MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1943	Net railway operating income 1942
Gulf, Mobile & Ohio	Oct.	1,973	$2,704,021	$232,085	$3,021,622	$445,730	$482,590	$85,476	$829,902	$1,964,010	65.0	$1,057,612	$571,441	$420,497	$650,748
	10 mos.	1,972	28,398,914	2,298,859	31,619,640	4,720,631	4,684,755	813,739	8,162,100	19,516,631	61.7	12,103,009	6,041,911	4,155,812	4,447,372
Illinois Central	Oct.	4,823	14,421,393	2,850,215	18,338,511	2,559,113	3,306,165	216,620	5,159,342	11,851,746	64.6	6,486,765	2,976,279	2,633,444	3,118,457
	10 mos.	4,826	138,078,485	27,682,843	175,780,328	26,514,192	31,776,673	2,101,932	49,597,034	115,674,191	65.8	60,106,137	30,844,323	27,010,253	20,672,532
Yazoo & Mississippi Valley	Oct.	1,524	1,983,989	377,687	2,513,414	413,835	389,009	39,511	990,035	1,934,426	77.0	578,988	276,647	127,190	1,136,619
	10 mos.	1,524	25,826,857	3,553,461	30,814,908	4,355,750	3,817,647	410,333	9,403,057	18,939,192	61.5	11,875,716	6,503,558	4,957,915	11,108,874
Illinois Central System	Oct.	6,347	16,405,382	3,227,902	20,851,925	2,972,948	3,695,174	256,131	6,149,377	13,786,172	66.1	7,065,753	3,248,353	2,765,547	4,254,989
	10 mos.	6,350	163,905,342	31,236,304	206,595,236	30,869,942	35,594,320	2,512,265	59,000,091	134,613,383	65.2	71,981,853	37,308,508	31,994,297	31,823,535
Illinois Terminal	Oct.	476	667,873	181,700	928,488	90,575	80,563	18,554	284,252	496,744	53.50	431,744	159,812	143,038	—211,745
	10 mos.	476	5,655,995	1,748,467	8,159,232	907,541	809,877	184,248	2,392,189	4,523,614	55.44	3,635,618	1,451,138	1,296,189	1,470,411
Kansas City Southern	Oct.	878	3,357,834	362,557	3,941,811	734,162	586,480	67,353	1,029,201	2,545,439	64.6	1,396,372	611,372	338,955	191,495
	10 mos.	878	30,388,468	3,683,511	36,165,834	6,116,436	4,633,006	596,184	8,795,371	21,279,678	58.8	14,886,156	7,204,156	4,530,679	5,143,719
Kansas, Oklahoma & Gulf	Oct.	328	355,213	1,522	359,866	55,868	20,302	10,855	84,203	182,542	50.7	177,324	131,562	109,303	106,335
	10 mos.	328	3,283,480	13,720	3,330,117	589,147	187,471	100,427	790,446	1,777,794	53.4	1,552,323	979,482	698,466	628,014
Lake Superior & Ishpeming	Oct.	156	199,199	163	272,365	36,865	39,559	613	51,183	139,851	51.3	132,514	91,325	100,017	80,920
	10 mos.	156	2,068,304	1,851	2,748,465	341,837	388,823	6,126	535,371	1,351,873	49.2	1,396,592	729,447	809,972	827,655
Lehigh & Hudson River	Oct.	96	247,494	13	248,007	61,331	31,380	4,766	74,540	179,401	72.3	68,606	35,133	20,859	57,840
	10 mos.	96	2,587,555	4,373	2,600,342	459,379	306,130	44,771	725,157	1,606,790	61.8	993,552	460,005	250,181	370,719
Lehigh & New England	Oct.	190	507,961	.....	514,047	44,513	113,291	6,779	142,913	325,952	63.4	188,095	97,842	110,768	78,962
	10 mos.	190	5,138,753	.....	5,170,129	448,082	1,099,875	67,026	1,445,940	3,243,333	62.7	1,926,796	976,453	1,164,443	1,215,947
Lehigh Valley	Oct.	1,260	6,888,897	676,269	7,963,441	996,837	1,252,165	113,779	2,828,702	5,389,110	67.7	2,574,331	1,536,839	1,150,281	1,451,988
	10 mos.	1,260	65,669,918	6,075,109	76,403,646	8,941,316	12,328,908	1,153,301	26,113,597	50,546,268	66.2	25,857,378	15,235,907	11,350,801	10,070,245
Louisiana & Arkansas	Oct.	854	1,444,894	150,699	1,650,485	381,011	205,460	35,043	399,154	1,087,217	65.9	563,268	219,066	152,838	176,445
	10 mos.	854	14,445,309	1,327,292	16,356,936	3,673,351	1,759,902	315,752	3,376,554	9,724,784	59.5	6,632,152	2,507,103	1,815,742	1,894,378
Louisville & Nashville	Oct.	4,745	12,943,672	3,864,941	17,720,720	1,668,986	2,750,417	199,754	4,978,036	10,123,446	57.1	7,597,274	1,939,391	2,250,840	3,253,863
	10 mos.	4,745	126,434,164	37,903,205	173,339,755	16,117,308	26,116,148	2,063,729	47,717,631	97,190,865	56.1	76,148,890	19,611,829	21,928,092	19,629,229
Maine Central	Oct.	991	1,237,983	288,504	1,647,055	342,287	343,376	14,292	601,481	1,354,796	82.3	292,259	145,808	100,654	319,521
	10 mos.	991	11,473,976	3,023,097	15,626,508	2,475,664	2,642,438	127,768	5,257,972	10,985,317	70.3	4,641,191	2,385,462	2,165,746	2,293,715
Midland Valley	Oct.	351	138,812	18	141,421	32,089	13,447	2,214	43,188	96,264	68.1	45,157	31,512	26,076	76,256
	10 mos.	351	1,476,271	1,899	1,506,338	280,798	136,517	21,690	418,505	906,902	60.2	599,436	396,100	305,766	290,000
Minneapolis & St. Louis	Oct.	1,408	1,269,252	32,903	1,353,050	93,945	212,739	71,034	475,080	910,602	67.3	442,448	361,036	337,569	417,045
	10 mos.	1,408	11,512,725	335,489	12,288,936	1,821,338	1,683,796	605,847	3,676,732	8,246,729	67.1	4,042,207	3,315,164	3,136,556	2,413,275
Minneapolis, St. Paul & S. S. Marie	Oct.	4,277	4,170,601	277,007	4,744,686	529,762	614,771	71,088	1,633,147	2,959,922	62.4	1,784,764	1,376,435	1,339,585	1,465,017
	10 mos.	4,277	34,608,313	2,378,608	39,713,486	5,798,367	6,098,254	701,569	13,622,675	27,354,982	68.9	12,358,504	8,340,110	8,173,946	6,588,444
Duluth, South Shore & Atlantic	Oct.	551	375,760	21,759	424,039	44,018	49,095	7,532	148,747	256,959	60.6	167,080	145,491	137,705	111,070
	10 mos.	551	3,126,872	284,432	3,678,830	589,538	487,188	75,629	1,242,359	2,466,107	67.0	1,212,723	1,013,845	965,041	856,774
Spokane International	Oct.	152	133,559	10,127	151,174	74,102	10,155	3,481	41,476	135,331	89.5	15,843	26,808	16,416	62,858
	10 mos.	152	1,512,169	78,379	1,672,841	367,308	89,557	31,960	401,427	944,548	56.5	728,293	334,733	249,720	324,817
Mississippi Central	Oct.	158	141,931	3,766	148,590	26,732	15,596	7,965	35,870	92,497	62.3	56,093	41,203	32,100	20,051
	10 mos.	158	1,376,187	56,982	1,460,566	273,776	154,594	84,485	336,853	907,403	62.1	553,163	347,477	263,007	307,814
Missouri & Arkansas	Oct.	365	172,290	3,834	183,752	56,145	21,899	7,566	66,525	159,173	86.6	24,579	17,713	1,467	—7,448
	10 mos.	365	1,701,853	36,567	1,815,089	567,869	209,297	74,709	640,575	1,559,214	85.9	255,875	176,182	24,490	41,065
Missouri-Illinois	Oct.	172	310,990	1,124	313,667	53,292	28,346	3,672	67,867	160,139	51.1	153,528	62,219	48,424	7,450
	10 mos.	172	2,644,466	5,861	2,667,821	396,937	316,646	33,894	634,602	1,445,115	54.2	1,222,706	462,802	367,398	544,795
Missouri-Kansas-Texas Lines	Oct.	3,293	5,464,198	1,317,633	7,298,051	1,062,723	718,037	123,687	1,952,998	4,079,022	55.9	3,219,029	1,943,190	1,512,840	1,331,179
	10 mos.	3,293	47,699,360	11,598,543	63,913,754	15,069,920	7,872,333	1,241,323	18,186,222	44,519,169	69.7	19,394,585	12,122,962	7,596,403	7,634,615
Missouri Pacific	Oct.	7,095	14,584,137	3,817,244	19,708,457	2,317,038	2,572,261	287,556	5,250,550	10,954,127	55.6	8,754,330	3,894,393	3,063,320	5,466,665
	10 mos.	7,096	143,793,784	30,445,223	186,225,229	19,982,665	23,527,456	2,847,045	49,670,555	101,006,634	54.2	85,218,595	42,471,688	33,746,290	41,298,902
Gulf Coast Lines															
International Great Northern	Oct.	1,155	1,628,714	493,814	2,350,371	469,051	312,745	34,214	818,502	1,729,230	73.6	621,141	434,303	279,970	852,380
	10 mos.	1,155	17,606,067	4,637,860	24,382,567	3,754,501	2,992,111	337,759	7,173,638	15,159,163	62.2	9,223,404	4,911,945	3,490,661	4,180,790
Monongahela	Oct.	171	498,333	2,279	503,666	57,403	58,803	725	121,429	241,769	48.0	261,897	139,257	54,002	115,390
	10 mos.	171	5,498,367	18,527	5,543,543	649,707	459,812	125	1,322,444	2,511,748		2,668,837	1,398,257	1,000,000	1,000,000

Table continued on next left-hand page



Locomotive Firebox Company

NEW YORK CHICAGO MONTREAL

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF OCTOBER AND TEN MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1943	Net railway operating income 1942
Montour	Oct.	51	$245,815	.....	$246,704	$21,288	$92,704	$1,135	$63,539	$186,250	75.5	$60,454	$11,409	$48,622	$111,147
	10 mos.	51	2,423,409	.....	2,439,762	159,106	636,653	9,637	635,353	1,516,750	62.1	923,012	282,085	657,880	695,604
Nashville, Chattanooga & St. Louis	Oct.	1,072	2,879,820	758,120	3,878,915	479,876	605,974	94,447	1,064,367	2,353,596	60.7	1,525,319	499,709	421,024	840,155
	10 mos.	1,088	25,327,059	7,205,969	34,864,315	4,203,647	5,716,889	842,357	10,143,633	21,924,284	62.9	12,940,031	4,799,549	4,065,096	4,474,592
Nevada Northern	Oct.	165	63,647	1,231	68,081	11,731	4,263	1,118	9,482	30,574	44.9	37,507	15,252	17,696	22,976
	10 mos.	165	515,220	11,945	554,084	117,011	35,697	11,783	94,142	298,327	53.8	255,757	98,133	122,216	139,796
New York Central	Oct.	10,747	40,156,996	15,146,076	61,588,039	9,198,948	11,855,792	750,566	22,639,003	46,812,548	76.0	14,775,491	7,931,757	6,232,345	11,675,306
	10 mos.	10,788	402,370,101	134,450,578	590,097,502	72,081,482	97,118,057	6,540,331	190,486,622	386,101,883	65.4	203,995,619	90,354,859	75,173,347	70,531,750
Pittsburgh & Lake Erie	Oct.	229	2,789,357	107,038	2,976,975	388,868	947,937	43,579	970,517	2,468,261	82.9	508,714	—115,835	406,189	557,577
	10 mos.	232	27,561,979	1,100,510	29,550,357	3,075,800	8,681,750	409,656	8,300,738	2,480,433	72.7	8,069,924	36,669	5,241,659	5,427,179
New York, Chicago & St. Louis	Oct.	1,688	8,263,658	344,228	8,751,397	698,686	1,145,620	130,569	2,692,368	4,840,561	55.3	3,910,836	1,602,858	1,132,769	2,109,687
	10 mos.	1,688	79,445,358	2,713,398	83,585,093	7,041,733	10,406,089	1,290,629	23,350,163	43,963,102	52.6	39,621,991	16,276,186	11,451,069	11,769,428
New York, New Haven & Hartford	Oct.	1,838	8,154,747	6,131,073	15,545,731	1,848,645	2,012,427	128,080	5,134,517	9,770,937	62.9	5,774,794	3,448,473	2,473,926	3,283,002
	10 mos.	1,838	78,954,224	59,762,051	149,963,388	16,682,130	19,520,242	1,448,311	45,502,034	89,206,799	59.5	60,756,589	38,934,843	28,957,069	24,444,705
New York Connecting	Oct.	21	224,430	.....	249,669	77,211	14,484	.....	46,881	140,781	56.4	108,888	—4,309	108,103	138,082
	10 mos.	21	2,057,917	.....	2,274,351	764,555	129,532	.....	435,302	1,346,269	59.2	928,082	86,827	1,145,211	1,514,020
New York, Ontario & Western	Oct.	546	668,572	34,788	748,035	99,693	151,359	23,387	373,854	667,863	89.3	80,172	42,883	14,120	36,704
	10 mos.	546	6,049,844	786,958	7,385,135	949,565	1,419,906	220,429	3,430,625	6,341,007	85.9	1,044,128	685,802	294,951	176,137
New York, Susquehanna & Western	Oct.	120	408,570	33,500	454,254	30,686	40,254	4,421	151,555	243,842	53.7	210,412	139,309	94,266	70,983
	10 mos.	120	4,288,263	381,594	4,883,859	359,843	392,249	42,685	1,667,362	2,618,162	53.6	2,265,697	1,574,307	920,323	777,937
Norfolk & Western	Oct.	2,154	10,992,448	1,324,920	12,714,884	1,334,819	2,646,625	171,050	2,892,728	7,343,851	57.8	5,371,033	1,415,489	2,147,461	2,737,655
	10 mos.	2,155	108,867,886	13,005,577	125,679,839	12,406,048	25,415,676	1,732,588	28,030,944	70,562,567	56.1	55,117,272	12,340,109	19,316,232	18,958,568
Norfolk Southern	Oct.	734	818,744	33,223	871,666	145,998	79,106	29,510	247,192	527,825	60.6	343,841	214,786	169,796	87,436
	10 mos.	734	6,509,444	277,923	7,000,041	1,496,394	768,974	296,215	2,119,644	4,949,906	70.7	2,050,135	1,242,282	952,314	1,078,792
Northern Pacific	Oct.	6,868	11,474,687	1,714,446	14,355,891	2,423,119	2,985,382	262,119	4,859,441	11,254,324	78.4	3,101,567	4,226,448	4,521,838	3,817,416
	10 mos.	6,868	96,805,585	14,107,954	120,764,343	15,739,205	20,855,643	1,804,909	33,224,464	76,585,651	63.4	44,178,692	24,411,566	28,019,454	21,917,621
Northwestern Pacific	Oct.	331	465,530	14,975	498,515	219,247	55,981	3,279	190,369	475,775	95.4	22,740	—5,899	—33,365	264,904
	10 mos.	331	4,850,393	144,268	5,197,935	1,648,550	548,953	26,336	1,554,979	3,847,276	74.0	1,350,659	1,114,392	838,108	736,195
Oklahoma City-Ada-Atoka	Oct.	132	157,679	396	161,727	22,111	6,109	1,134	37,454	71,537	44.2	90,190	53,581	39,883	17,443
	10 mos.	132	1,293,109	1,964	1,320,576	188,981	45,589	11,503	307,469	596,082	45.1	724,494	442,154	284,500	260,138
Pennsylvania	Oct.	10,160	57,846,811	21,608,501	86,444,592	10,204,374	14,706,182	963,484	29,772,111	58,227,072	67.4	28,217,520	8,249,008	8,111,155	19,687,934
	10 mos.	10,175	552,459,393	200,684,376	815,699,058	87,206,515	135,336,301	9,543,337	288,716,619	545,793,872	66.9	269,905,186	114,409,799	106,780,022	116,143,614
Long Island	Oct.	378	1,265,823	2,161,728	3,595,858	580,650	524,504	11,181	1,568,620	2,740,167	76.2	855,691	248,780	2,872	26
	10 mos.	378	11,439,832	23,595,122	36,590,640	5,378,430	4,789,376	279,723	14,525,269	25,536,600	69.8	11,054,040	5,937,339	3,828,154	2,332,910
Pennsylvania-Reading Seashore Lines	Oct.	392	515,275	242,758	792,516	223,837	83,863	6,720	440,960	777,346	98.1	15,170	—51,515	—159,664	—19,785
	10 mos.	396	4,952,279	5,556,234	10,857,347	1,807,165	1,017,620	99,121	4,447,714	7,575,355	69.8	3,281,992	2,366,991	1,215,573	—129,684
Pere Marquette	Oct.	1,983	4,269,373	253,362	4,728,678	805,930	803,186	66,224	1,632,481	3,466,945	73.3	1,261,733	639,163	501,214	785,567
	10 mos.	2,012	40,613,419	3,125,684	45,876,292	6,676,147	7,646,728	673,299	14,905,122	31,388,354	68.4	14,487,938	6,459,281	5,433,577	5,023,527
Pittsburg & Shawmut	Oct.	97	145,953	.....	146,243	31,001	20,297	1,535	36,494	94,889	64.9	51,354	28,149	25,003	18,538
	10 mos.	97	1,239,098	.....	1,242,035	252,397	202,801	19,457	316,244	839,997	67.6	402,038	253,322	226,622	280,697
Pittsburgh & West Virginia	Oct.	136	639,050	53	657,633	106,256	131,290	18,845	165,519	449,256	68.3	208,377	133,716	147,356	158,014
	10 mos.	136	6,406,879	149	6,594,818	999,277	1,132,707	194,112	1,634,987	4,211,955	63.9	2,382,863	1,491,869	1,542,347	1,462,264
Pittsburg, Shawmut & Northern	Oct.	190	124,881	.....	125,913	22,494	22,032	1,036	44,898	95,604	75.9	30,309	23,829	16,735	14,132
	10 mos.	190	1,220,278	.....	1,237,684	230,150	221,933	10,285	449,399	968,630	78.3	269,054	205,186	130,555	80,592
Reading	Oct.	1,417	8,184,671	835,250	9,416,994	943,806	1,682,752	71,902	2,665,244	5,526,260	58.7	3,890,734	1,706,237	1,641,191	2,172,537
	10 mos.	1,419	83,106,340	8,395,608	95,919,780	10,032,109	18,325,490	783,444	30,947,283	62,042,371	64.7	33,877,409	16,147,885	14,858,838	17,478,186
Richmond, Fredericksburg & Potomac	Oct.	118	1,544,209	1,362,708	3,143,544	271,832	293,934	11,992	761,391	1,439,960	45.8	1,703,584	422,610	294,613	272,447
	10 mos.	118	15,299,692	13,233,908	30,800,619	1,742,009	2,686,275	132,899	7,073,748	12,607,725	40.9	18,192,894	4,911,259	3,281,559	2,556,974
Rutland	Oct.	407	311,135	71,601	457,721	57,178	71,999	12,460	208,998	365,434	79.8	92,287	66,215	67,995	62,504
	10 mos.	407	2,595,651	639,369	3,902,632	547,100	753,244	114,995	1,854,162	3,407,100	87.3	495,532	254,359	304,937	496,782
St. Louis-San Francisco	Oct.	4,665	7,256,750	2,082,838	10,008,360	1,240,703	1,908,685	178,118	3,323,682	6,997,271	69.9	3,011,089	1,917,524	1,857,475	3,607,650
	10 mos.	4,667	63,510,417	19,066,177	88,706,286	10,015,033	15,489,242	1,518,496	27,681,885	57,794,815	65.2	30,911,471	19,785,296	19,188,102	19,867,537
St. Louis, San Francisco & Texas	Oct.	159	246,526	10,998	265,123	28,164	32,107	9,824	92,760	169,391	63.9	95,732	57,116	32,847	147,476
	10 mos.	159	3,175,271	235,576	3,484,835	344,396	278,081	97,465	931,379	1,715,899	49.2	1,768,936	1,093,980	851,836	913,183

Table continued on next left-hand page

A War Plant...with Peacetime Ideas about SERVICE!

Of course war makes a big difference! With Army, Navy and Maritime Commission war production orders to handle; with normal demands for railroad materials tremendously increased, the Paxton-Mitchell plants are mighty busy these days. Volume of production is up more than *six hundred per cent*.

But when it comes to service and the company's idea of giving its customers what they want *when* they want it, there has been little change. Many of our customers are surprised to find their "special" orders accepted by a company which seems to be glad to have the business. Generally speaking, Paxton - Mitchell Company is still giving the very best of service to its oldest friends . . . the railroads. The war has made very little, if any, difference in that!

PAXTON MITCHELL COMPANY

2614 Martha Street **Omaha 5, Nebraska**

P-M METALLIC ROD PACKING
P-M IRON AND BRONZE CASTINGS

P-M Metallic Packing

. . . the Packing that Packs

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF OCTOBER AND TEN MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1943	1942
St. Louis Southwestern Lines	Oct.	1,607	$5,219,754	$300,315	$5,645,994	$458,569	$525,212	$99,063	$1,323,788	$2,527,988	44.8	$3,118,006	$1,222,557	$905,496	$1,128,084
	10 mos.	1,613	48,436,226	3,124,138	52,820,491	4,075,285	4,938,728	989,541	12,328,582	23,476,905	44.4	29,343,586	12,643,278	9,431,729	7,590,262
Seaboard Air Line	Oct.	4,177	6,965,612	3,247,789	11,240,211	1,234,129	1,489,689	211,273	2,995,712	6,368,794	56.7	4,871,417	2,771,417	2,440,641	2,726,783
	10 mos.	4,179	73,361,798	33,354,688	114,151,340	11,359,600	14,390,440	2,211,380	30,822,178	63,097,568	55.3	51,053,772	33,063,772	28,490,689	24,360,868
Southern Railway	Oct.	6,514	14,474,265	4,974,209	20,602,113	2,137,700	3,146,573	225,267	5,785,465	11,896,832	57.7	8,705,281	3,113,666	2,828,293	4,295,069
	10 mos.	6,514	143,850,699	47,778,134	203,252,266	20,534,674	29,102,061	2,081,384	50,343,592	107,866,418	53.1	95,385,848	32,505,181	30,161,400	32,814,375
Alabama Great Southern	Oct.	315	1,498,223	467,870	2,050,582	147,178	269,724	27,157	551,104	1,044,926	51.0	1,005,656	407,479	333,747	126,740
	10 mos.	315	14,563,813	4,104,042	19,557,921	1,441,553	2,690,240	251,106	5,035,789	9,933,071	50.8	9,624,850	3,284,101	2,467,254	1,594,459
Cincinnati, New Orleans & Tex. Pacific	Oct.	337	2,314,800	657,912	3,124,410	172,630	630,788	35,853	772,604	1,696,631	54.3	1,427,779	528,654	539,307	346,054
	10 mos.	337	23,458,838	5,479,382	30,302,166	2,504,530	5,398,812	357,942	6,873,274	15,954,217	52.7	14,347,949	5,280,584	5,173,285	3,854,861
Georgia Southern & Florida	Oct.	397	327,322	163,631	540,519	77,011	65,867	2,447	177,171	336,687	62.2	203,832	108,646	70,621	166,269
	10 mos.	397	35,172,767	2,170,889	6,227,488	714,043	573,989	24,213	1,695,328	3,160,792	50.8	3,066,696	1,307,815	964,383	812,643
New Orleans & Northeastern	Oct.	204	1,009,056	227,477	1,283,219	118,727	113,776	14,733	338,413	618,611	48.2	664,608	272,079	169,013	—155,266
	10 mos.	204	9,433,657	2,186,003	12,112,449	997,151	1,157,346	128,461	2,811,539	5,428,530	44.8	6,683,919	2,370,509	1,462,004	1,302,084
Southern Pacific	Oct.	8,299	28,150,415	8,234,837	39,594,937	6,065,115	6,294,059	538,475	12,543,229	27,338,616	69.0	12,256,321	5,084,218	3,613,227	10,103,470
	10 mos.	8,318	272,996,401	79,602,087	384,197,332	46,449,834	58,668,210	5,133,601	106,984,451	235,500,574	61.3	148,696,758	64,419,913	49,943,015	59,580,350
Texas & New Orleans	Oct.	4,341	8,160,495	2,207,064	11,168,824	1,291,065	1,219,642	135,663	3,101,535	6,081,713	54.5	5,087,111	1,681,847	1,121,969	3,325,682
	10 mos.	4,341	82,385,677	21,203,360	109,664,692	10,823,169	12,218,394	1,400,127	26,164,589	53,867,368	49.1	55,797,324	27,081,621	21,400,223	18,699,134
Spokane, Portland & Seattle	Oct.	930	1,806,217	236,419	2,162,482	344,079	129,791	12,911	616,504	1,157,104	53.5	1,005,378	651,562	425,600	879,983
	10 mos.	930	16,744,672	1,735,107	19,730,570	2,522,306	1,287,168	122,626	5,809,147	10,299,161	52.2	9,431,409	6,752,290	4,771,231	5,609,624
Tennessee Central	Oct.	286	315,092	48,567	382,456	78,887	53,367	7,762	124,731	282,986	74.0	99,470	47,905	36,366	71,427
	10 mos.	286	3,308,593	508,323	4,010,968	784,413	528,528	68,794	1,142,554	2,692,455	67.1	1,318,513	831,434	698,346	411,916
Texas & Pacific	Oct.	1,884	3,818,040	1,688,195	6,206,657	824,287	967,151	106,336	1,430,369	3,589,174	57.8	2,617,483	963,283	872,721	1,590,977
	10 mos.	1,891	36,020,000	16,776,291	57,886,834	7,335,641	8,818,101	1,028,078	13,740,831	33,362,082	57.6	24,524,752	8,558,230	7,777,480	9,341,750
Texas Mexican	Oct.	162	114,787	851	139,826	30,386	16,481	4,239	40,224	100,466	71.9	39,360	25,923	18,672	29,610
	10 mos.	162	1,447,360	9,723	1,687,025	254,155	14,528	38,512	409,382	932,333	55.3	754,692	561,441	470,179	397,264
Toledo, Peoria & Western	Oct.	239	429,072	4	432,740	45,013	19,956	23,508	84,251	186,493	43.1	246,247	233,775	216,219	142,593
	10 mos.	239	3,948,058	479	3,990,505	394,785	187,655	233,464	750,904	1,699,669	42.6	2,290,836	2,159,701	1,990,618	710,849
Union Pacific System	Oct.	9,798	31,901,981	7,926,962	43,637,482	6,538,528	8,194,573	541,833	12,689,894	30,289,294	69.4	13,348,188	5,518,306	4,201,620	10,512,673
	10 mos.	9,821	290,992,365	71,977,438	392,002,020	53,948,120	65,844,171	4,722,663	100,237,443	241,295,190	61.6	150,706,830	46,426,787	35,465,027	42,046,081
Utah	Oct.	111	121,543	.....	121,567	10,413	41,997	467	35,247	92,925	76.4	28,642	15,544	11,387	21,499
	10 2mos.	111	1,171,577	.....	1,171,783	144,946	407,688	4,399	314,490	915,219	78.1	256,564	135,988	119,263	145,528
Virginian	Oct.	657	2,382,228	9,692	2,465,672	258,821	554,425	27,119	475,100	1,366,296	55.4	1,099,376	484,376	604,080	595,120
	10 mos.	658	21,445,919	92,537	22,299,971	2,258,530	4,814,841	250,537	4,163,635	12,000,058	53.8	10,299,913	5,029,913	6,241,770	6,213,894
Wabash	Oct.	2,393	7,355,399	961,539	8,787,766	946,072	911,747	175,019	2,490,837	4,783,669	54.4	4,004,097	1,473,355	1,083,922	816,014
	10 mos.	2,393	66,723,207	8,670,074	79,551,470	8,518,671	9,121,211	1,751,499	23,659,709	45,480,909	57.2	34,070,561	14,148,533	9,876,399	7,389,625
Ann Arbor	Oct.	294	514,004	8,493	534,662	62,656	80,407	16,904	202,611	374,809	70.1	159,853	54,945	48,257	43,764
	10 mos.	294	4,797,052	98,881	5,037,433	503,952	813,916	162,916	1,937,860	3,538,403	70.2	1,499,030	724,969	668,559	407,649
Western Maryland	Oct.	840	2,734,682	31,869	2,836,227	384,728	548,913	41,645	687,897	1,745,191	61.5	1,091,036	561,036	606,529	789,559
	10 mos.	842	27,994,903	309,012	29,177,260	3,705,904	5,632,516	424,773	7,213,836	17,714,222	60.7	11,463,038	6,461,038	6,634,685	5,813,377
Western Pacific	Oct.	1,195	4,063,872	592,689	4,798,451	474,322	484,988	77,362	1,122,489	2,298,961	47.9	2,499,490	1,441,783	1,244,753	1,984,878
	10 mos.	1,195	35,211,260	4,477,606	41,081,113	3,947,439	4,434,190	755,717	10,717,985	21,050,429	51.2	20,030,684	11,648,264	10,058,470	8,907,399
Wheeling & Lake Erie	Oct.	507	2,132,564	10	2,239,607	248,339	393,068	39,205	640,612	1,369,670	61.2	869,937	182,667	359,416	692,820
	10 mos.	507	21,649,384	52	22,566,958	2,342,284	3,845,689	398,952	6,225,056	13,302,092	58.9	9,264,866	1,817,834	3,288,089	2,858,567